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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Simultaneous Dislocation of both Shoulder Joints—Death in five hours from Fracture through the Base of the Skull, with Intercranial Hæmorrhage and Laceration of Cerebellum—Dissection.* [With an Illustration.] By WM. H. VAN BUREN, M.D., Professor of Anatomy in the University of New York, Surgeon to the New York and St. Vincent's Hospitals, etc.

WILLIAM COY, a well-built, middle-aged man, was brought to the New York Hospital on April 21, 1857. It was learned from his friends that he had fallen headlong down a flight of steps in a house in Pearl Street. He was perfectly insensible, with widely dilated and immovable pupils; pulse 84, rather full and soft; skin cool; respiration hurried and labored, and at each expiration bright arterial blood issued from nostrils and mouth, in small quantity; no bleeding from the ears. He sank rapidly, and died five hours after admission.

On examination of the body thirteen hours and a half after death, extravasated blood was found beneath the scalp over the left parietal bone and in the temporal fossa of the same side, and a fissure commencing about the centre of the parietal bone and extending obliquely downward and forward to the base of the skull. On removing the calvarium, a large amount of fluid blood was found between the dura mater and bone, covering the surface corresponding to both hemispheres of the brain. The brain proper was apparently uninjured, but an extensive laceration occupied the substance of the right hemisphere of the cerebellum. After removal of the brain, the

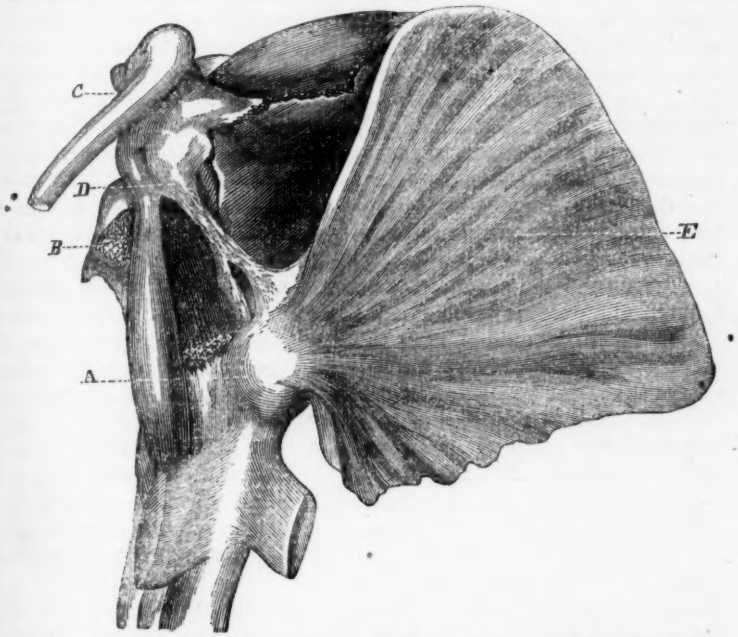
fracture was found to extend through the petrous portion of the left temporal, and across the body of the sphenoid bones, splitting off the sella turcica completely.

Both shoulders were observed to present the usual physiognomy of dislocation into the axilla, and distinct crepitus could be felt on both sides when the humeri were rotated. On dissection of the right shoulder, the head of the humerus was found in the subscapular fossa, lying between the surface of the bone and the subscapular muscle, which had been lacerated and torn up from its attachments to make a bed for it. Its exact position was about one inch and a half below, and one inch nearer the median line of the body than the base of the coracoid process. The greater tuberosity of the humerus was broken off, and retained in its normal relation to the glenoid cavity of the scapula by the capsular ligament and the muscles to which it gives attachment. The capsular ligament, extensively lacerated in front and on its inner aspect, presented an elongated shred stretching from the upper margin of the glenoid cavity downward and inward to the dislocated head of the humerus, to which it was still attached. The long tendon of the biceps was found occupying its normal relation to the greater tuberosity, having been dragged out of the bicipital groove, which was empty. The coracoid process of the scapula was fractured through its base, and dragged forward and downward by the action of the coraco-brachialis muscle and the short head of the biceps.

The accompanying wood-cut, which conveys a good idea of the condition and relation of the parts just described, was engraved from a drawing taken from the recent dissection by Dr. J. W. Hooker, senior walker in the first surgical division. The head of the bone is represented as somewhat lower down than the position in which it was at first found; the dissection of adjacent parts, and the stretching of the torn and softened subscapular muscle by the weight of the bone, have dragged its head as low as the lower border of the scapula; it was at first in contact with the anterior concave surface of the scapula, and entirely above its inferior margin, as already described.

On dissection of the left shoulder, a condition of parts was found similar to that described as existing upon the right side, with the following exceptions:—the head of the humerus was displaced more directly downward, resting upon the anterior margin of the lower border of the scapula, just below the glenoid cavity; the capsular ligament was lacerated on its inner aspect, and less extensively; and the coracoid process was uninjured. The greater tuberosity, however, was fractured

off almost exactly in the same manner as on the right side, and retained its natural position in relation to the glenoid cavity, and the long tendon of the biceps.



A, head of humerus. B, greater tuberosity of the humerus torn off and retained in its normal relation to the glenoid cavity by the capsular ligament. C, clavicle, attached to which is the coracoid process, fractured through its base. D, portion of the torn capsule still attached to the humerus. E, subscapular muscle partially torn from its attachments by the head of the humerus, and infiltrated with blood; the head of the humerus lay between this muscle and the concavity of the scapula.

Apart from its rarity as an example of simultaneous luxation of both humeri, the case just related is remarkable from the similarity of the fracture of the greater tuberosity of the humerus on both sides. The detached fragments were circular in outline, little more than an inch in diameter, and each represented the section of a sphere in its shape, comprising, in fact, little more than the outer shell or cortical layer of the humerus, into which the supra-spinatus, infra-spinatus, and teres-minor muscles are inserted; and they were evidently torn off by the sudden and violent action of these muscles.

This complication of dislocation of the shoulder, with tearing off of the greater tuberosity of the humerus, if we are to credit Malgaigne, occurs much more frequently than is gener-

ally supposed, and its presence explains, according to this surgeon, the sensation of crepitus which Velpeau asserts, is so often felt in cases of luxation when the shoulder is firmly grasped by the left hand, and the dislocated limb rotated forcibly by the right. Malgaigne also asserts that this lesion is accompanied by the appearance of ecchymosis upon the inner side of the arm within a few days after the accident (*Traité des Fractures et des Luxations*, t. II., p. 512). In two, out of the six dissections, which he had made of cases of what he classifies as intra-coracoid luxations of the shoulder (according to him the most frequent variety), the greater tuberosity of the humerus was found torn off, and occupying the same position and relation to the glenoid cavity as in the case which I have described.*

Fracture of the coracoid process, which existed on the right side in the case now recorded, is a rare complication of dislocation of the shoulder, and the accident, in fact, under any circumstances, is of very unfrequent occurrence; when it does happen it is the result, as in the present instance, of excessive violence, and is apt to be associated with extensive injury to the surrounding parts. There is a case of this fracture now under my charge in the New York Hospital, the result of a very severe fall upon the back of the left shoulder, in which there was also complete dislocation of the whole clavicle of the same side—both extremities of this bone being entirely separated from their normal connections—the acromial end projecting prominently backward over the upper margin of the scapula, and the sternal end being thrust forward in front of the sternum. A fracture of the pelvis also exists in this case.

Simultaneous dislocation of both humeri is a very rare accident. The following instances have come to my knowledge:—

II.—A case is reported in the London *Lancet*, vol. I., 1846, p. 532, by Mr. Holmes Coote, which occurred in Mr. Lawrence's service at St. Bartholomew's Hospital. "A man, fifty-nine years of age, while walking in the street, trod upon a piece of orange peel, slipped, and, falling heavily upon his left side, was stunned. He remembered stretching out the left elbow and crossing the right arm to break the force of the fall. He entered the hospital a fortnight afterward (Jan. 22, 1840).

* L'arrachment du trochiter, commun a ces deux cas, se retrouve dans le plus grand nombre des autopsies. Thomson en avait decrit un premier exemple en 1761; on en lit un autre dans les *Leçons de Dupuytren* * * * * Mons. Lallemand en a rencontré un troisième (*Gaz. Médicale de Montpellier*, Oct., 1840). Dans tous ces cas, le trochiter anaché de l'os s'était réfugié sous l'acromion (*Malgaigne*, op. cit., t. II., p. 514).

The left humerus, separated from the side, was dislocated under the pectoral muscle, where the head of the bone could be readily felt; there was a great hollow under the acromion, and he was unable to raise the hand to his head. Upon examining the right shoulder, of which he made no complaint, and which was stripped for the purpose of comparing the two joints, a hollow was noticed under the acromion; the head of the humerus was found in the axilla, he could bring the elbow close to the side, but was unable to raise the hand to his head. Both fore-arms were bent, the right supporting the left. The right limb performed its movements so freely that no one conjectured, at first, that it was injured. The patient, who was still evidently suffering from the blow upon the head, answered questions incoherently, and could scarcely give any account of himself." The two dislocations were successfully reduced, and the patient left the hospital on the 14th of February, with perfect motion and sensation in both limbs, and complete recovery of his mental faculties.

III.—A third, and curious case is recorded by Fischer (*Preussiche Medecinische Zeitung*, p. 344, 1836). A butcher, in endeavoring to secure a stout hog in a slaughter house, in an unusually violent effort to control the struggling animal, dislocated both humeri at the same moment. The butcher, who was a very vigorous man, refused the assistance of a surgeon who was called, and insisted upon first trying a remedy of his own. By the surgeon's help, however, both arms were gently elevated above the head of the patient until they were parallel with the axis of the body. The patient then, seating himself upon a raised bench, seized, with both hands, a transverse beam over his head, and threw himself suddenly and forcibly from the seat. A crackling noise was heard, and both arms were found restored to their natural motions. Who does not recall, observes the writer, in connection with this case, the method recommended by Mothe for the reduction of dislocations of the humerus? (*Encyclographie des Sciences Medicales, Août*, 1836.)

IV.—A fourth instance, the result of an accident similar to that which occurred in the case which I have recorded, was related to me recently by my friend, Prof. Geddings, the eminent surgeon of Charleston, S. C. A gentleman was aroused in the middle of the night by a cry of fire; and in groping his way in the dark, through the hall, to reach the main stairway, mistook his course, and pitched headlong down a steep flight of back stairs. Prof. Geddings, who was summoned to his assistance, found that both shoulders had been

dislocated into the axilla. They were both readily reduced, and the patient made a good recovery.

V.—In the Edinburgh *Medical Journal*. vol. II., p. 25, it is stated that a case of simultaneous dislocation of both humeri, during an epileptic fit, once occurred in the Royal Infirmary; they were readily reduced by Sir George Ballingall.

VI.—Malgaigne (op. cit. vol. II., p. 461), describes a case successfully treated by Sanson, of the Hôtel Dieu of Paris. A porter, placing himself in position to receive a sack of grain upon his back, held on to the rear of his wagon by both hands, his arms being elevated above his head, and the body leaning forward; while in this attitude, the sack fell heavily on the back of his neck, forcing the trunk of the body violently forward, while he still held fast to the wagon with his hands. The result was a simultaneous dislocation of both humeri under the coracoid processes.

VII.—Finally, a somewhat equivocal case is recorded as having occurred to Professor Nathan Smith, of Yale College, in the person of a lady who had dislocated both shoulders at the same time, in an attack of puerperal convulsions. The dislocations are said to have been reduced at the end of seven months.

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ART. II.—*On the Pathology of Leucorrhœa, as it exists at the present day.* By WM. C. ROBERTS, M.D., Fellow of the College of Physicians and Surgeons, New York, etc., etc.

FIFTY years ago the question was insultingly asked by the *Quarterly Review*, "Who reads an American book?" The query has since then been so repeatedly answered, and the contributions of our countrymen in all departments of literature and science have in the past century been so abundant, that it would hardly seem possible that our literary existence could be so completely ignored as we find it to be when consulting English authorities on subjects connected with medical science. It appears that, when writing, our brethren over the water, while carefully acknowledging every thing derived from the French or the German schools, obstinately—whether from ignorance, or prejudice and a determination to be unjust—shut their eyes to, and exclude from, their pages, every thing which is referable to the subject they are treating from the pen of an American. Hence, we find them constantly announcing as discoveries and achievements in medicine and surgery, what had long before originated among ourselves. In reference to no subject is this

more true than with regard to leucorrhœa, on the present state of the pathology of which I design to say a few words. The subject, in a practical point of view, is very interesting. It is very frequent, a source of much complaint and inconvenience, and very amenable to treatment and to cure.

The leading authorities in England, on the subject at this day, are Drs. J. H. Bennet and W. Tyler Smith.

The former tells us that at the time of his commencing his investigations into the nature, causes, and therapeutics of ulceration and induration of the neck of the uterus, in the Paris hospitals, the most esteemed French works were insufficient, and the English nearly completely barren on the subject.

In the preface to the 2nd edition (1846), he tells us that the results he has arrived at are so diametrically opposed to the opinions current in the profession, as reproduced by the most recent and classic writers, that they must appear startling even to those posted up in continental researches. The reader, from this, will be doubtless prepared for some extraordinary revelation in this 2nd edition of Dr. B.'s treatise on the subject of leucorrhœal pathology, of which Dr. B. is to be considered the sole exponent, and of which his country may well be proud. His writings produced, he tells us, a marked change in the opinions of a large portion of the profession. Others, among them Montgomery and Kennedy, have advocated and expressed similar views, although we do not find in the paper of the latter (Dub. *Jour.*, 1847), any acknowledgment of so great indebtedness.

Now, let us try to glean from Dr. Bennet's voluminous and many-cased treatise, what are *his* views of the pathology of leucorrhœa, and see how far they differ from what had been known and published anteriorly to his time; and in what consists their extraordinary originality, their startling novelty, on which this astounding revulsion in public sentiment depends.

1. *A synopsis of Dr. Bennet's views on the pathology of leucorrhœa.*—Inflammation of the uterus is a very frequent disease (the commonest), unsuspected, overlooked, and the cause of many morbid states. Diseased conditions of the neck of the womb were known to Hippocrates, and clearly to P. Egineta, who used a *dioptra* for their investigation. This knowledge was resuscitated by Recamier's discovery of the speculum; at once adopted by Lisfranc, who much contributed to establish uterine pathology on a sound, practical basis.

Mr. B. observes that, in Clarke, the standard authority, inflammatory ulceration of the cervix uteri is not mentioned. He tells us, very properly, that inflammation of the body of the unimpregnated uterus, is a rare disease; that of the *neck*,

exceedingly common, being in reality the cause, in nineteen out of twenty cases, when confirmed, of leucorrhœa, dysmenorrhœa, menorrhagia, irritable uterus, prolapsus, etc. "Leucorrhœa, more especially when chronic, is nearly always the result of inflammation and ulceration of the neck of the uterus." Dr. B. again takes occasion to repeat, that the doctrine he brings forward—that inflammation of the uterus and uterine neck with ulceration are, in the majority of cases, the real causes of morbid uterine changes and symptoms—may appear strange to him who bases his pathological opinions on the treatises of the day.

2. *Pathological state of the neck of the uterus in leucorrhœa, (inflammation and ulceration.)*—These consist in soft tumefaction and enlargement; progressively induration, descent, positive retroversion, a vivid red tinge, uniform or dotted with florid papulæ, or white pustules. On the inflamed surface, a certain quantity of muco-pus, which must not be confounded with *the abundant, white, creamy secretion* which is frequently found in this region, the result simply of congestion.

Again, there are pseudo-membranous patches upon the cervix. Internally, the cavity of the cervix expands, and the lips of the os are everted and patent (diagnostic): the mucous membrane dark, livid red, easily bleeding, secreting muco-pus not easily wiped away, or glairy, transparent mucus, like uncooked white of eggs, secreted by the mucous follicles, from the cavity of the cervix, and "*nearly always* a concomitant of inflammation."(?) It constitutes one of the principal forms of the discharge commonly called "whites."

Inflammation may exist without, or co-exist with ulceration, the latter most commonly beginning around the os and within it, and extending more or less outward over the neck. The simplest and commonest form is that of abrasion or excoriation only; cervix vivid red, with minute granules, easily detected by lunar caustic. The author defends the propriety of calling this state an abrasio nor ulceration, rather than a granular inflammation. In other cases, granulations may be large, livid, fungous, and bleeding; with livid hue of neck and varicosity (*ulcère variqueux* of Fr.). There may be one ulceration, or several smaller ones; the neck is found in varying degrees of hypertrophy and patulousness of the os; the feel is soft and velvety—appreciable to the touch; the entire cavity of the cervix, as far as the os internum uteri, may be ulcerated.

The discharge may be, first, pure pus, thick and yellow, thin and sanious, scanty or abundant, or mixed with mucus. "When the purulent secretion is very abundant and mixed with a large quantity of mucus, more or less reaches the exterior, and the patient is said to have the whites."

It depends on congestion, or inflammation of mucous follicles, and varies in character, according to seat and intensity. The *white, milky, creamy* fluid is the secretion of the numerous mucous follicles which cover the cervix and stud the upper part of the vagina. The result of mere congestion. The thick, tenacious, ropy, transparent, white-of-egg mucus issues from the cavity and os, and is secreted by the intra-uterine follicles. It is always a concomitant of inflammation of the lining membrane. When abundant, the discharge, in inflammatory cases, is not "entirely" purulent, but partly mucous. The discharge of pure pus would almost certainly be characteristic of gonorrhœa. Blood often mixes with the muco-purulent secretion, particularly after intercourse, and is then very significant of ulceration. In reference to the last pathological condition, inflammatory hypertrophy, though enlarged, it is at first soft, and at length indurated: chronic or acute, and sometimes attaining to a great size. It is generally the result of the extension of superficial inflammation to the central tissues, a *sequela*, not a cause of ulceration; but not always. The os, from round, becomes transversal, fissured, and one or other lip may be, and oftenest is, the seat of a more special enlargement than the other.

Dr. B. then goes on, in the manner of a man who has closely observed, and thoroughly understands his subject, and in language which will meet with a response in the practical experience of every experienced practitioner, to speak of co-vaginitis and vulvitis. irritation of rectum and bladder, pain, dysmenorrhœa, menorrhagia, sympathetic impairment of digestion, of respiration, of general nutrition, biliary derangement, and cerebro-spinal irritation. On all these, Dr. B.'s observation merit my highest praise, though I am compelled to deny them the merit of originality.

In reference to the common and very erroneous idea entertained and expressed by the public at large, and which it is at once the aim and effect of Dr. B.'s labors to refute, he says, and I must entreat the reader's attention to his words:—

"The vaginal discharge which women, who are laboring under inflammatory ulceration of the neck of the uterus, often p. sent, is all but universally supposed to be the result of constitutional weakness. This error is, perhaps, the most inveterate and general of all, and has been sanctioned during centuries by the writings of innumerable men of eminence." *A fortiori* is this absurd when the discharge is purulent. The sensation of weight and bearing down depends on inflammatory hypertrophy, and not on, as is generally supposed, falling of the womb from weakness or laxity of ligaments. Hence, the care demanded in the use of pessaries. By similar error, *back-*

ache, as well as whites, is generally mistaken for indications of constitutional weakness. Ovaritis, hepatitis, stricture of rectum, affections of bladder are often wrongly supposed to exist in these cases. The general health, it is to be remembered, and nutrition of the system do not give way and sink in the female, *any more than in the male* without evident cause or tangible reason. *Pathological anatomy:*—Erosion or destruction of mucous membrane, submucous fibres exposed, ulcer not excavated, cervix in a state of cellular hypertrophy.

Dr. B. goes on to study the subject of inflammatory ulceration of the neck of the uterus in the virgin, of which again he seems to consider himself the discoverer, and which presents, he thinks, important modifications. I apprehend, however, from my own observations, and Dr. B.'s cases more particularly, that they are practically, as well as pathologically, insignificant.

We have now presented to the reader a succinct, yet tolerably ample analysis of Dr. Bennet's views on the pathology of uterine inflammation and ulceration, and its connection with leucorrhœa; which, based as they undoubtedly are upon truth, and practically accurate, are both interesting and instructive. They are easily deducible from what precedes, and suggest very naturally the practice which is required. I propose, without further inquiry into their validity, to show that they are neither so original, nor so startlingly novel, nor so wholly previously ignored, as to have taken the whole world by surprise, overwhelmed Dr. B. with illimitable glory, and effected a revulsion in sentiment and practice throughout the whole civilized globe.

The reader who is not well posted up in the subject of leucorrhœal pathology, will perhaps be astonished to find that, not only were Dr. Bennet's views promulgated by several European pathologists, and treatment based upon them, but that *in this country* he was anticipated in all his conclusions in a very precise and particular manner. In the years 1843 and 1844, the writer of this article, and his friend, Dr. Jas. Crane, now of Brooklyn, then associated in the department of diseases of women and children, in the Northern Dispensary of this city, devoted peculiar attention to this subject; and examining every case which applied, when practicable, with the speculum, collected a large fund of information in relation to it, and established, as they conceived, its true pathology more precisely than had hitherto been done. These facts, with certain collateral information derived from fellow-laborers in the cause of uterine pathology in this city, Taylor, Buel, Beales, and others, they published in an essay, in which also they exhibited the

progress and state of the subject during the preceding one hundred and seventy years; noticed "the peculiar appearances of the discharge," and made an "attempt to connect it, more directly than has hitherto been generally done, with inflammation of the vagina, cervix, and lining membrane of the uterus." (Vide N. Y. *Journal of Medicine* for May, 1845.) At this time, all that was known of Dr. J. H. Bennet and his opinions was derived from an article therein quoted from the *Jour. des Conn.*, November, 1843, admitting three species of ulcerations in the cervix. His views were then crude, limited, and unelaborated, and his allusion to the discharge merely a passing one. In no previous article had a description of its various seats and appearances occurred, as minute and accurate as in that to which I have alluded, and which Dr. Bennet, though doubtless his own was original, and the result of his own observations, might have copied, and, as we shall see, has scarcely improved upon.

I shall now proceed to show, first, that Dr. Bennet's views on the pathology of ulceration of the neck of the uterus, and leucorrhœa, are neither so novel, unprecedented, and original, and, consequently, so startling, as he seems to consider them; nor is he entitled to all the merit of prior discovery that he claims, as he would easily have seen had he perused the article in question, while publishing his own; various other pathologists had anticipated him in the views which he seeks, justly as we think, to establish, and which do not differ materially, if at all, from those expressed by ourselves previously to all, save the first, of his publications on the subject.

Morgagni distinctly recognized, by post-mortem examination and the use of the speculum, the connection between leucorrhœa and inflammation of the vagina, os, and cavity of the uterus. Clark attempts to describe and classify the various forms of leucorrhœal discharge, and one of them he attributed to inflammatory action of the cervix uteri. Lagneau describes several varieties of discharge, and attributes them to a more or less inflammatory irritation of the membrane which lines the vagina, uterus, and tubes. Dewees, Capuron, D. D. Davis, Dupuytren, Jobert, Dugès, all allude to the existence of uterine inflammation as a cause. The pathology of inflammatory disease of the os and neck of the uterus, as contained in the great work of Boivin and Dugès, can scarcely be added to or improved upon, even by Dr. Bennet at the present day. Duparcque perfectly describes benign and primitive ulcerations of the neck. Churchill describes the discharges, and is well posted up from Boivin and Dugès on the subject of a correct pathology of leucorrhœa. Lisfranc thoroughly understands the ulcerations of the neck and their connection with leucorrhœa, and his description of them leaves

nothing to be desired. To go no further in the enumeration of those whom we have quoted in our essay, we can not but express our surprise at the self-complacency of an author, who declares, in his second edition, that the "results he has arrived at are so diametrically opposed to the opinions current in the profession, as reproduced by the most recent and classical writers on uterine pathology, that they must appear startling to those even acquainted with continental researches," and who thinks that the influence of "my writings has, in four years, been subversive of the opinions of a large portion of the profession."

Secondly, I shall analyze the results arrived at by Dr. Crane and myself, in the article alluded to, and compare them with those attained to by Dr. Bennet; the one derived from a two years gleaning of the scanty field of the Northern Dispensary; the other, the fruits of repeated harvestings of the fertile fields of, I know not how many, Parisian hospitals. We shall, in this way, be enabled to judge how far we, in this country, with minor appliances, preceded Dr. B. in the promulgation of those startling novelties of doctrine which have so completely, in a few years, changed the features of uterine pathology.

And, following the construction of our article, we commence *with the discharge*. Dr. Bennet makes three varieties. 1. Muco-pus. 2. An abundant, white, creamy secretion, the result simply of congestion. 3. Transparent, glairy mucus, like uncooked white of egg—a principal form of the discharge. In the essay alluded to we acknowledge, from among those enumerated by preceding authors, "only the transparent, or colorless, like that which escapes from the nose on a cold day, (the third form of Bennet), the thin, viscid, milky, starch-like, or *amyloid*, always follicular and cervical, the yellowish, greenish, or puruloid (the muco-pus of Bennet), and the perfectly transparent, albuminous, ropy jelly which escapes in trembling, tenacious masses from the os, sometimes amber colored by blood, sometimes *semi-opaque, like the white of egg which has undergone very slight coction*, sometimes with yellowish or whitish streaks, sometimes even more purulent looking." We submit to all practical observers that this is a more accurate description of the varieties of leucorrhœal discharge than is contained in the great work of Dr. Bennet, who has not paid sufficient attention to the italicized variety, which then was, and for fifteen years subsequently has been, infinitely the most frequent form of leucorrhœal discharge coming under our observation, and concerning which we further say: "In bad cases of leucorrhœa, with erosion without ulcerations, the mucus which bathes the neck looks thin, yellowish, or greenish, *and very like pus*, when accumulated in quantity at the bottom of the vagina. *But, on removing it with a sponge, and extending it by*

pressure of the finger, it loses this characteristic appearance, and seems to be only the transparent, or semi-opaque, opalescent, gelatinous mucus from the uterus, streaked with whitish striæ or flocculi." We claim that these are the facts and distinctions in regard to this variety of uterine leucorrhœa, which have been overlooked, or, at least, unnoticed by Dr. Bennet. We had not, at the time our essay was written, examined the discharge by the microscope, so as to be sure whether, or not, the yellowness depended on the presence of pus. The investigations made of late have, I believe, decided in favor of Dr. B's. assertion that "the secretion from the surface of uterine ulceration is necessarily purulent," at least, in certain cases. Pure it is almost never seen, and even in the most purulent looking matter of the whites, we suspect it occurs in very limited quantity, if at all. The arguments which we have employed, in reference to this subject, on p. 45 of the second part of our essay, have lost, even at the present day, little or none of their cogency in favor of the occasional non-secretion of pus from inflamed mucous surfaces. The essay, moreover, contains information in reference to the stain, quantity, etc., of the discharge, in connection with its varieties, which will be looked for in vain in Bennet or elsewhere.

We next come to the pathology of leucorrhœa. Referring to the *rêsumé* from Dr. Bennet, which we have quoted on p. 304, we request the reader to compare with it the following passages from our essay, published in May, of the year 1845, that in which the treatise of Dr. B. was published, and without any knowledge on our part at the time, of its existence.

"The pathology (Ess. p. 46) of leucorrhœa is a high state of *congestion* and irritation, or of *actual inflammation*, of one or other, or all the tissues which compose the structure of the uterus and vagina." (See Bennet, p. 59, 4 Am. ed.) "The real cause of the morbid symptoms was the existence of local inflammation," and "inflammation of the uterus and neck, with ulceration of the latter, are, in the majority of cases, the real causes of morbid uterine changes."

"We suppose that when an abundant, thick, semi-opaque, or striated, gelatinous mucus is exuding from the os, presenting a puruloid appearance in its aggregate in the vagina, the *mucous membrane of the uterine cavity is of a deep red color, from sanguineous congestion, or inflammation*, whence is secreted mucus, coagulable lymph, and, perhaps, pus." Dr. B. considers the discharge coming from the cavity of the uterus, or cervix, in connection with inflammation, to be a *transparent glairy mucus*, (which he also admits may be muco-purulent), which, except in its stated want of semi-opacity, we take to be the same; otherwise, we have not seen the discharge which Dr. Bennet calls

"transparent, glairy mucus," issuing from the os uteri, except as a physiological condition, and Dr. B. has not seen that which to us has ever appeared peculiar to a pathological state. We suspect, however, there is no material difference between us, though we wonder at Dr. B.'s insisting so much on the characteristic of *transparency*, as indicative of, and occurring in, inflammation of the cervix.

The essay continues:—"We suppose that when the thin, milky, or starch-like (amyloid) mucus is escaping freely, the mucous follicles, crypts, or glands of the vagina and cervix are in a congested, inflamed, and irritated condition; the body will oftenest be found to have become engorged, enlarged, tender, indurated; the neck swollen, hot, tender, of a deeper red than natural; the seat of superficial ulcerations, more or less numerous and extensive; one or both lips of the os tincæ are enlarged and engorged, the os gaping and red within, the vagina relaxed and redder than natural. All the signs of a (muco) metritis, of more or less acuteness, *of the neck* at least, will exist, of which the discharge is an important diagnostic, but which the speculum alone can fully, and always should be employed to reveal. Leucorrhœa, then, is rarely a disease *per se*, it is rather a symptom of an utero-vaginal inflammation."

Having thus shown ourselves to have simultaneously proclaimed in this country, if not actually anticipated Dr. B. in the announcement of the pathological views contained in his treatise, and so deprived him of the claim which he seems to make to almost exclusive originality, as well as shown that preceding pathologists had done very much toward establishing the true nature of pathological states of the uterus attended with discharges, the essay proceeds, in the clearest terms, to deduce the therapeutical consequences from them that Dr. Bennet does; to repudiate the idea of "weakness" as constituting the disease, or of a tonic treatment sufficing for the cure; enforcing the necessity of local antiphlogistic and alterative measures, and thus anticipating and confirming that very revulsion in sentiment and practice which Dr. B. seems to suppose has resulted wholly from his own writings on the subject. "Authors have blindly followed each other in attributing leucorrhœa, in defiance both of fact and analogy, to *weakness*, until the very terms of '*whites*' and '*weakness*' have come to be synonymous. But, thanks to the improved mode of diagnosis and a sounder philosophy, this long cherished error must ere long be abandoned, *and the dependence of leucorrhœa on structural changes, even where great constitutional debility exists, conceded to be one of the best established facts in pathology.* Debility supervenes upon the long continued local irritation, more from its constitutional effect on

the nervous system and the disorders of function it occasions, than the profuseness of the discharge." (Ess. cit.)

The essay is then continued by the narration of a great number of cases, reported with more or less accuracy, in which all the varieties of pathological states known to Dr. Bennet are exhibited, with the symptoms that accompany them in the great majority of cases, and every variety of the uterine discharge accurately described :—the clear, tenacious, transparent, albuminous or white of egg, or healthy, from within the os, stiffening the linen only ; the opalescent, semi-transparent, opaque, striated, gelatinous, puruloid or puriform, looking purulent when accumulated in the vagina, but whether or not containing pus globules we hold to be doubtful, staining the linen, more or less yellowish or greenish ; the amyloid, milky, or starch like—the "follicular" of Clark and others—coming from the outer surface of the neck and inner of the vagina, not intra-uterine, stiffening the linen only. To these only can be added, as far as our experience extends, a rather profuse, thin, almost serous and tolerably transparent mucus, intra-uterine, without ulceration, and with a swollen and relaxed state of the lips of the os, without much redness or evidence of engorgement, a very obstinate form of the disease ; and a staining of the ordinary form of mucous uterine discharge, with blood (resembling the rusty sputa of pneumonia), from exudation from, or abrasion of, the cervico-fundal uterine mucous-lining membrane ; of which rare occurrence, an instance is at present passing under our observation. There is with it, slight engorgement of the cervix, and commencing ulceration around the os. The cases contained in the essay, besides exhibiting the pathological appearances of the neck and os in all their known varieties, accurately and sedulously discriminate between the forms of uterine discharges which are proper to each.

We have now, we trust, fully established the originality, accuracy, and completeness of our own observations on this branch of uterine pathology. They were made independently of any other knowledge of Dr. Bennet's labors, than was contained in the article cited from his pen, and freely and complimentarily acknowledged in our essay. This appeared in April and July, 1845, having been long in preparation. The articles which, when collected, formed the first edition of Dr. Bennet's treatise, since passed through four editions, first appeared in February, 1845, in the *Lancet*, and finished in the May following. It is no less singular than true, that these articles had wholly escaped us in our extended and anxious search for authorities. It is seldom that there occurs such perfect coincidence in observation and theory, of object and result of pathological research, simul-

taneously undertaken by observers ignorant of each other's labors; and how gladly should we have availed ourselves of them, had they not been wholly unobserved. Not so ours by Dr. Bennet, since, in two subsequent numbers of the *Lancet* (1846), it was mentioned with encomium by the editor, and largely quoted, and also, as corroborative of his own views, by Dr. B. himself. However, in no later edition of his work has it ever been alluded to; and we appeal confidently to the generosity of our transatlantic *confrère*, to do us justice in a future edition. We must claim for ourselves and our country, an entire originality of observation and of opinions resulting therefrom, and coevality in expressing them. With whatever other pathological views we may have shown ourselves acquainted, we knew, at least, nothing of those of Dr. Bennet; which we point to with pride, as confirmatory of those which we had ourselves arrived at, and which we are happy to characterize in this place, as marked by close observation, a happy generalization, and such an amount of practical experience and industry as falls to the lot of, and can be attributed to, but few writers of the day. Dr. B. has exhausted his subject. The effect of his labors on pathology and practice can not be doubted; and we only ask to be acknowledged to have accompanied him *pari passu* in his pioneer campaign, and to share with him in the honor of his achievement.

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Dr. Smith, observing that much contrariety of opinion and acrimony of argument existed in reference to many points, and thinking justly that physiology is the basis of pathology, laboriously investigated, by means of the microscope, the anatomy of the cervico-uterine mucous membrane, and the constituent elements of the leucorrhœal discharge, and has thus contributed much valuable information, and sub-divided leucorrhœa according to a strictly physiological basis, and thereby attained nearer to perfection, in its pathological consideration, than could have been done by depending wholly on the appearances presented by the unaided eye. It remains to be seen whether these interesting developments of that useful and elegant instrument have contributed, in a like degree, to more successful therapeutics.

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In the consideration of the different forms of leucorrhœa, the differences in structure between the vaginal and cervico-uterine mucous membranes, must be carefully attended to; the former, closely resembling the skin, covered by a thick layer of scaly epithelium, containing few, if any, mucous follicles; its secretion *acid*, consisting entirely of plasma and epithelium; its object lubrication; the latter, a true mucus lining, covered in great part by cylinder epithelium, abounding in mucous follicles, pouring forth a true mucous *alkaline* secretion consisting of mucous corpuscles and plasma, with little or no epithelium. This latter forms the discharge in "mucous," the former secretion that in "epithelial" leucorrhœa. These varieties may co-exist,

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The above history of the various forms of leucorrhœal discharge, their sources and composition, leaves little or nothing to be desired, added to or detracted from. Their real nature is now, for the first time, established, and Dr. Smith deserves great credit for his industry and zeal. Dr. Smith proceeds,

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We thus find that, while Dr. S. contends for the occasional separate existence of leucorrhœa without accompanying lesions of the os and cervix, and for the general secondary character of the latter, he does not deny the connection between them, nor the necessity of local treatment, and thinks that an inquiry into the exact pathology of the os and cervix, and their morbid secretions, is necessary to bring back "the attention of the profession from the inflammation theory to one of sounder basis."

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mony of discharge. 5. Destruction of epithelium. 6. Loss of villi and granularity. 7. Induration, fibrinous deposit in, hypertrophy of cervix.

Among the constitutional influences of leucorrhœa may be enumerated the drain from the profuse discharge of mucus, pus and blood (?); hectic from its absorption (?); dyspepsia; derangement of menses; anæmia; the "*heat and chill disorder*," the first printed allusion we have ever seen to what our American ladies call "hot flashes;" neuralgia, pains in the side, back, and thighs, vesical and rectal irritability.

From the preceding observations, which embrace very nearly the entire field of leucorrhœal pathology, the reader will be readily prepared for the conclusion to which the author comes, and to which, I believe, we must subscribe as most rational and real. It will be seen that the pathological states of the uterus are not denied; nor are their consequences, in reference to the increase and continuance of the leucorrhœal discharge, nor the importance of physical exploration, or local treatment, on its cure. But any one who has frequently seen, as we have of late, profuse, weakening, and troublesome forms of leucorrhœa, with yet so little local disease of visible character as in no way to explain its occurrence on the theory of its being a product of inflammation, and not to justify the adoption of any local measures for its relief, must, we think, with the able author, "differ very strongly from the opinions of those who refer almost all the conditions upon which leucorrhœa depends, to inflammation of the os and cervix." "It can not," we fear, "now be disputed, that many of the affections of the os and cervix, recently stated to constitute ulcerations of the surface, are, in reality, only epithelial abrasions of more or less completeness." "The importance and frequency of ulceration" are probably "less than were formerly asserted;" and, when it does occur, it is often secondary instead of primary." "The vaunted importance of inflammation, as the great cause of uterine disorder, must be altogether modified;" epithelial abrasion" must take the place of ulceration; irritation or relaxation, that of 'inflammation.'" "The most common and immediate cause of leucorrhœa, is simple irritation of the glands of the cervical canal, and the abrasions and indurations of the os and cervix, are the results of the long continued discharge, rather than of primary inflammation."

The reader has, we conscientiously believe, in the foregoing paragraphs and pages, the true development of the nature, causes, and consequences of leucorrhœa, with a perspicuity and truth not hitherto previously attained. But while we give to the views of Dr. Tyler Smith, thus ably and practically expressed,

the results of the most ample, careful, accurate, and scientific investigation and observation, our most cordial assent, and believe that we have in them a basis of theory and practice so firmly established as that no future researches will either alter or invalidate them, we must strongly protest against their being employed to dispense either with the physical examination or local treatment of the discharge itself, or the morbid conditions of the os and cervix with which it is connected, whether as cause or effect. For this purpose, the speculum must ever continue to be employed in severe cases, with increased utility and confidence; and this, we are happy to find, and we shall hereafter show, when treating of the treatment of leucorrhœa, is the strongly expressed opinion of the able author himself.

Whoever has been extensively engaged in the treatment of this frequent and troublesome disorder, must have often derived the greatest satisfaction and advantage from the local application of the scarificator, or leeches, caustics, etc., to the interior of the os and cervix, or uterine cavity itself, to epithelial abrasions and ulcerations; of iodine to the indurated and engorged cervix, etc., by means of this valuable instrument, applicable in no other way; and have become fully satisfied, not only of its great advantage over the older methods of treatment, constitutional and local, but of the utter impossibility of successfully treating many, if not most cases of this character, without its aid. And it is earnestly to be hoped that no futile and frivolous objections to its employment, based upon totally unfounded and most erroneous ideas of its immorality and indecency, insulting to the moral purity of the mind of the patient, and the results of prejudice and limited observation on the part of the practitioner, will ever be allowed to interfere with its employment. To those who employ it judiciously, in proper cases, its aid in removing the discharge in leucorrhœa, and in detecting and treating the lesions of structure with which it is so often associated, will be daily manifested, their confidence in its utility strengthened, and its indispensability proved. Without it, no physician can be sufficiently instructed in the condition of his patient, to determine or employ the means proper for her relief. To some of the objections raised, even very lately, and by men, we regret to say, of eminence in the profession, who *should* be found on the side of truth and progress, and give it, without prejudice or misrepresentation, the sanction of their authority, we shall hereafter reply.

We here close this essay on the strictly pathological part of the subject of leucorrhœa, which, to the attentive reader and zealous student and practitioner, we feel assured, can be devoid neither of interest nor instruction.

In a future number of this Journal, we propose to continue our critical analysis of Dr. W. Tyler Smith's very excellent work, by the examination of some concomitant topics of great interest which it embraces. Among them, are the relations between leucorrhœa, syphilis, gonorrhœa, and purulent ophthalmia neonatorum; to the disorders of the function of menstruation; to sterility and abortion; and, above all, the treatment of leucorrhœa. On all which the remarks of the author are able, practical, and highly instructive.

ART. III.—*Experimental Researches and Observations, in relation to the Bending, Partial Fractures, and Fissures of the Long Bones.* By FRANK H. HAMILTON, M.D., Professor of Surgery in the University of Buffalo, N. Y., etc., etc.

Sect. 1.—BENDING OF THE LONG BONES.

STRICTLY speaking, no bone can be much bent without being also more or less broken, and that, whether it immediately and spontaneously resumes its position or not; for, if the bending and straightening of the bone be repeated a sufficient number of times, the yielding of the fibres will become apparent, and at length the separation will be complete. The first of this series of flexions was quite as much responsible for this result as the last, and, no doubt, performed its share in the production of the complete fracture.

There could be no impropriety, therefore, in speaking of a bending of the bones as a variety of incomplete fractures, as I have done in the first section of my *Report on Deformities after Fractures*, made to the Am. Med. Assoc. in 1855.*

They have been called, not inappropriately, interperiosteal fractures, since in these cases the periosteum is not broken; M. Blandin thinks that the outer and semi-cartilaginous laminæ of the bone also do not break, while the deeper laminæ suffer an actual disruption.† But it is quite as probable that in a majority of cases the true pathological condition is a compression of the bony fibres upon one side, with a corresponding expansion upon the opposite side, with only a slight interstitial fracture, too trivial to be easily recognized even in the dissection. Sometimes, as I have several times observed in my experiments on the bones of chickens, when the bones are small, and the bending is near the centre of the shaft, the whole of the

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* Op. cit. pp. 421–422.

† MARKHAM'S *Obs. on the Surg. Practice of Paris.* London *Med. Chir. Rev.*, vol. 34, p. 473. 1841.

laminæ on the side of the retiring angle produced by the bending are doubled in, or indented toward the hollow of the bone, so that the fibres on the side of the salient angle are not even stretched, and much less broken. In such cases, the interstitial disruption, if it exists at all, and I think it does, first takes place in the deeper layers of the retiring angle.

I might, therefore, feel justified in continuing to call these cases partial fractures, or, perhaps, interstitial fractures, but I believe that the whole subject will be rendered more intelligible if I call them simply bending of the bones, as distinguished from those other and more palpably partial fractures of which I shall speak presently.

1. *Bending with an immediate and spontaneous restoration of the bone to its original form.*—The possibility of this accident, to which, however, surgical writers have hitherto made no distinct allusion, is rendered certain by the following experiments :—

Experiment 1. July 16, 1857.—I bent the tibia of a Shanghai chicken, four weeks old, at about the middle of the bone. It was bent to an angle of quite twenty-five degrees, but it was not felt or heard to break. It immediately and spontaneously resumed the straight position.

July 18, two days after the bending, I dissected the limb, and found no trace of the injury, either within or without the bone, unless I except a very minute blood-clot in centre of shaft.

Experiment 2.—I bent the leg of a chicken, four weeks old, at the same point and to the same degree. It immediately resumed the straight position.

Dissection after two days.—Nothing abnormal except a small blood-clot in the centre of the bone, and a slight disorganization of the medulla.

Experiments 3 *and* 4.—Bent both legs of a chicken, four weeks old, at the same point and in the same manner. They immediately resumed their positions.

Dissection after two days.—No lesions or morbid appearances which I could detect.

Experiments 5 *and* 6.—Bent both wings of a chicken, four weeks old. Bent the right wing to an angle of thirty-five degrees. I did not feel them break. Both resumed their positions spontaneously.

Dissection after two days.—No lesions or other morbid appearances.

Experiment 7.—July 16, 1857, I bent the leg of a Shanghai chicken, five weeks old, below the knee, and at about the middle of the bone. It was bent to an angle of about twenty-five degrees, but the bone was not felt or heard to break. It immediately and spontaneously resumed the straight position.

July 20, four days after the bending, I dissected the leg, but could not discover the slightest trace of the injury, unless it be that there was a very minute ossific deposit in the centre of the bone at the point at which I suppose it to have been bent.

Experiment 8.—July 16, 1857, I bent the right leg of a Shanghai chicken, five weeks old, at the same point as in first experiment, and to the same extent. Did not seem to break. It immediately and spontaneously resumed the straight position.

Dissection after four days.—Nothing appeared to indicate the seat of the bending except a small globule of blood in the centre of the shaft.

Experiment 9.—Bent the leg of a chicken, six weeks old, in the same manner and to the same degree as in the other examples. It resumed its position spontaneously.

Dissection after ten days.—No evidence of injury of any kind; the bone being sound and straight.

These experiments were made in connection with others which I shall take occasion hereafter to mention. They are selected, and constitute the whole number of those in which I did not feel the bone break or crack under my fingers. In every instance the bone sprung back immediately and spontaneously to its natural form. In no instance could I afterward discover any trace of lesion, or sign indicating the point at which the bone had been bent before dissection; nor did dissection itself disclose anything but the most inconsiderable marks, and that in but three examples.

I infer, therefore, not forgetting the caution with which the conclusions from all such experiments ought to be applied to similar accidents upon the human skeleton, that whenever the bones of healthy infants have been forcibly bent, they will, probably, in all cases, unless prevented by causes foreign to the bones themselves, spontaneously and immediately resume their position; and that no sign will remain to indicate that a bending has occurred. The accident will not be recognized; and, as a farther inference, this bending does not belong to that class of cases which have been so frequently described as examples of bending without fracture.

2. *Bending, without immediate and spontaneous restoration of the bone to its original form.*—"Dethleef, believing that he had broken the two bones of the leg of a dog, found the fibula bent, without a fracture. Similar results were obtained by Duhamel upon a lamb; by Troja upon a pigeon; and I have myself twice succeeded in bending the fibula while breaking the tibia. The possibility of simple curvature is then not contestible," (the writer means to say that the possibility of a simple curvature

remaining permanently bent, is not contestible,) "but we must observe that they have never been obtained except upon young animals, and that they have been unable to maintain themselves permanently except through the aid of a fracture and displacement of a neighboring bone; and there is a wide difference between these and those pretended curvatures which some believe they have seen in man, in which the curved bone maintains itself, and resists perfect reduction until the fracture is complete."*

In this single paragraph Malgaigne seems to have given a fair summary of the testimony upon this point. With the exception of these and a few other similar examples, some of which I think I have observed myself, where one of the bones of the forearm has been broken and the other bent, I know of no well attested cases of a permanent bending; using the term bending in a sense distinguished from a partial fracture.

If, in numerous cases mentioned by surgical writers, there has seemed to be probable evidence that the permanent bending was unaccompanied with fracture, there has always been wanting, so far as I know, the positive evidence of dissection. The example of partial fracture mentioned by Fergusson, and represented by a drawing, is described as having also "toward the lower extremity a slight indentation and curve."† This was the radius of a child; but how long the child survived the accident, and what was the condition of the ulna, we are not informed. The observations made by Jurine, of Geneva, in Switzerland,‡ by Barton§ and Norris,‖ in Philadelphia, all fail to furnish any such conclusive evidence of the correctness of their own views. Norris says that "Thierry, of Bordeau, Martin, and Chevalier, had all met with and published cases of this kind prior to the appearance of Jurine's paper (in 1810), the former of whom asserts that Haller, in experimenting upon the subject, had been able satisfactorily to produce the same accident in young animals." For myself, I can not say how much confidence we ought to place in these assertions of Thierry, Bordeau, Martin, and Chevalier, having never seen the papers referred to; but since Dr. Norris has neglected to inform us whether any dissections were ever made, we shall not be expected to regard their testimony as conclusive.

With the qualifications now made, Gibson was more nearly right when he said, "Dupuytren and Dr. John Rhea Barton

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* *Traitè des Frac.*, etc.; par L. F. Malgaigne, tom. 1, p. 48.
† *Practical Surgery;* by Wm. Fergusson, 4 Am. ed., p. 208.
‡ *Jour. de Corvisart et Boyer*, tom. 20, p. 278, etc.
§ *Phila. Med. Recorder*, 1821.
‖ *Phila. Med. Jour.*, vol. 29, p. 233; 1842.

have each furnished accounts of *bent* bones. There are no such injuries, however, in my opinion; such cases being, in reality, *partial* fractures, from which deformities result, upon the same principle that a piece of tough wood, like oak or hickory, if broken half through, may be inclined to one side and shortened, although still held together by interlocking of fibres. Many specimens in my cabinet, and in the Wistar Museum, attest the accuracy of this assertion."*

In my own experiments upon the chicken, the bones uniformly resumed their original position as soon as the restraining force was removed, unless a fracture occurred, and this notwithstanding the bones were bent quite abruptly and to an angle of twenty-five degrees. Certainly, if the bones of children may be bent during life and be made to retain this position without a fracture, then the same thing might be done upon the bones of children recently dead, and, by successful experiments, this long agitated question might be easily and for ever put to rest.

It will be understood that our observations are confined to the long bones. That the flat bones, and especially the bones of the cranium, in childhood, may be indented by blows, and remain in this condition, is undeniable. Scultetus says he had seen "the skull pressed down in children, without a fracture, so that those who touch or look upon it can perceive a small pit,"† and it has been mentioned by many writers since, and perhaps before, his day. I have myself published two examples of it in the second volume of the *Buffalo Medical Journal.*‡

Sect. 2.—PARTIAL FRACTURE OF THE LONG BONES.

1. *Partial fracture, with immediate and spontaneous restoration of the bone to its original form.*—No writer seems to have given any special attention to the form of fracture now under consideration, although its existence appears to have been occasionally recognized. In the case reported by Camper, in 1765, of a partial fracture of the tibia, the bone had regained its natural form, but whether immediately after the accident occurred, or at a later period, I am not able to learn.§ Jurine, Gulliver, and others, have noticed a gradual strengthening of the bone after a partial fracture, so that its complete restoration has been accomplished after several weeks or months; but this, although partly due to the same cause which produces occasionally an immediate restoration, namely, its elasticity, is

* *Institutes and Practice of Surgery;* by WM. GIBSON, Phila. 1841, vol. 1, p. 254.
† *The Chirurgeon's Storehouse;* by JOHANNES SCULTETUS, 1674; p. 126.
‡ Op. cit., p. 347; 1846: cases 1 and 2.
§ *Essays and Obs. Phys. and Lit. of Soc. of Edinburgh,* vol. 3, p. 537. Also, MALGAIGNE, op. cit. *p.* 44.

in part also due to other causes, and will be more properly considered under the next division of partial fractures.

Says Malgaigne, "Finally, at other times the fracture takes place without opening and without curvature; the only sign which one can recognize is a yielding of the bone under the pressure of the finger, at the point of fracture; yet, upon the living subject, we may see the same symptom pertain to complete and simple fractures without displacement." *

Blandin has described the accident a little more distinctly: "In some cases of fracture of the clavicle occurring about the middle of the bone in young subjects, displacement of the fragments does not immediately take place, thus giving rise to a risk of an error in diagnosis, by which the ultimate probability of a cure is diminished. A lad seventeen years of age, was recently admitted into the Hôtel Dieu, under the care of M. Blandin, having, a few days previously, fallen upon one of his comrades while playing with him, when he instantly experienced pain and a cracking sensation about the middle of the left clavicle, where there soon formed a tumor, which, increasing, induced him to enter the hospital. On examination, the swelling was found to occupy the middle of the clavicle; it was about as large as half a hen's egg, ovoid in shape, well circumscribed, colorless, and hard, but sensible to pressure. There was not any deformity of the shoulder, nor any abnormal modification of the axis of the bone, to indicate the existence of a fracture; and although the different movements of the arm caused pain in the shoulder, yet they could be made without much difficulty.

"The symptoms in this case would lead to the belief that it was a case of simple periostitis, caused by external violence; but M. Blandin at once decided that there existed a fracture of the bone, having seen a similar case previously at the hospital Beaujon, where the tumor was treated as traumatic periostitis, the patient merely carrying his arm in a sling, until, by a sudden movement of the limb, displacement of the fragments was produced, and clearly demonstrated the existence of a fracture. A second case occurring soon afterward, M. Blandin profited by the experience gained from the preceding, and by moving the fragments of the broken clavicle on each other, obtained motion and crepitus. Still these indications were not so clear, that M. Marjolin could diagnosticate a fracture; he was of opinion, that the case was one of exostosis, probably syphilitic, and the crepitus, he believed, depended on an erosion of the osseous surface. In consequence, the patient was left to

* Op. cit. tom. 1, p. 50.

himself, until a movement of the arm gave proof of the fracture by the displacement of the broken portions of the bones.

"Two other cases occurring in young subjects have been admitted since into the Hôtel Dieu, under the care of M. Blandin, one of whom was purposely left without surgical assistance, while Desault's bandage was applied to the other. The former soon showed evidences of consecutive displacement; the latter was cured without any deformity following.

"The surgeon may diagnose a fracture, without displacement of the middle portion of the clavicle, when a circumscribed tumor forms in that part in young subjects, consecutive on a fall on the shoulder, and motion of the fragments, with crepitus, can be detected, there not being any syphilitic taint in the constitution."*

Prof. Green, of Geneva Med. Col., N. Y., has furnished me the following account of a case which came under his observation.

"December 21, 1847, I was called to dress what was considered to be a fractured clavicle, of George Stone, a lad eight years of age. One of his playmates had tripped him in such a manner, that he fell on his side, striking on the extremity of the left shoulder. I found that he was unable to raise the hand to the head. On examination, I discovered on the posterior edge of the clavicle, at the inner extremity of the external curvature, a point which was swollen, tender, and painful. The anterior edge of the clavicle was continuous, and there was neither crepitus nor displacement. Considering the age of the patient, and the appearance of the parts, I diagnosed bending of the clavicle forward with a *splitting out* of the posterior edge, and that the bone, by its elasticity, had resumed its ordinary direction. In order to be safe, however, I dressed the shoulder as for actual fracture of the clavicle, lest the fracture *might* have extended nearly through the bone, and there be subsequent displacement The swelling subsided in four or five days, and as all seemed secure, I removed the dressings, and heard no more of the matter until the 11th of May, ult., when I was called to see the patient again, and found that he had met, the day before, with precisely the same accident, at the old point, and by the same cause, being tripped down by a playmate. This time the swelling and other symptoms of inflammation were greater than before. The anterior edge of the clavicle was entirely continuous, but he could not raise the arm. I merely directed him to keep to his bed until the swell-

* *Am. Jour. Med. Soc.*, vol. 31, p. 473, from *Jour. de Med. et Chirurg. Prat.*, July, 1842.

ing and inflammation should in a measure subside. In three or four days he was about. The callus left is not large, still it is quite evident."

The following examples which have come under my own observation, will illustrate more completely their usual history and symptoms:—

A. B., aged three years, fell from the sofa on to the floor, striking, it is thought, on her right shoulder. Two days after this, she fell again, and then, for the first time, Mr. B. noticed the deformity. She was brought to me three days after the second fall. There existed then a round, smooth projection at the outer end of the middle third of the clavicle. It felt hard, like bone. The line of the clavicle was not changed. I advised a handkerchief sling, simply to steady and support the arm. Seven months after the accident, she fell sick and died. The projection continued at the time of death, only slightly diminished.

H. S., aged six years, was thrown from a horse, partially breaking his left clavicle, near its middle. Dr. Sprague, of Buffalo, was employed. The projection in front was for several days very apparent, and was examined by myself at Dr. Sprague's request. The bone did not seem to be out of line. Five years after the accident, I examined the lad, and could not find any trace of the original injury.

September 25, 1855.—Mrs. T. C., brought to me her infant child, then but two weeks old. Upon the left clavicle, at a point a little nearer the acromion than the sternum, was an oblong swelling, of three quarters of an inch in length, smooth and hard like callus, the skin was not reddened, nor tender. There was no motion or crepitus, and the line of the axis of the bone was perfect. The mother, who had been put to bed by a midwife, thinks the injury occurred in the act of birth, although she did not notice the swelling until a week after.

October 20.—Nearly one month later, I found no change in the condition of the bone; the hard lump remained, but it was still entirely free from tenderness. I have not seen the child since.

An infant boy, three years old, fell, August 12, 1857, from the hands of the nurse. The child cried, but the point of injury was not detected until the third or fourth day, although the mother examined the shoulders and neck carefully at the time. She is quite certain that if any swelling or discoloration had been present she would have seen it then, or on the subsequent days, while washing and dressing the child; when first seen it was very distinct, but not so large as at present.

August 19.—The child was brought to me. A little to the

sternal side of the middle of the right clavicle there is an oblong node-like swelling, of the size of the half of a pigeon's egg, hard, smooth, and feeling like bone; there is no discoloration or swelling of the integuments; no crepitus or motion; the line of the clavicle seems nearly or quite unchanged.

I have not noticed this variety of accident in any other bone except the clavicle, yet it is not improbable that it occurs occasionally, and perhaps quite as often, in other long bones, but that its existence is not elsewhere so easily recognized.

Of seventy-two fractures of the clavicle, which have come under my observation, seventeen were partial fractures; and of these, four were spontaneously and immediately restored to their natural axes.

Experiment.—In fourteen experiments upon the bones of chickens, a partial fracture, with immediate and spontaneous restoration, has occurred but once. In nine of these cases the bones were only bent, and in five they were partially broken; an immediate restoration has occurred, therefore, in one case out of five of partial fracture; while in my reported examples of partial fracture of the clavicle it has been noticed about once in every four cases. The following is the experiment to which I have referred:—

I produced a partial fracture of the tibia in a chicken six weeks old. The fracture was near the middle of the bone. I felt it break under my finger; but on removing the pressure, it immediately and spontaneously resumed the straight position.

I dissected the limb on the tenth day. The line of the axis of the bone was perfect; but on the fractured side was a node-like enlargement, sufficient to be distinctly felt and seen before the soft parts were removed.

Pathology.—In no case, except in my single experiment upon the bone of a chicken, has the actual condition been determined by dissection, and if any question has existed heretofore as to the possibility of an immediate and spontaneous restoration after a partial fracture, this experiment ought to decide it in the affirmative; but then the nine first experiments already quoted have shown that a mere bending with immediate restoration leaves no such traces or signs as have been described as following these accidents. We have, therefore, the negative argument that, since a bending and restoration leaves no signs, these examples reported by myself and others as having occurred, and as having been followed by a node-like swelling, etc., must have been partial fractures. Moreover, in one of the cases reported by Blandin, there was a feeble crepitus; and in another, the subsequent displacement proved the correctness of his diagnosis.

We conclude, then, that these are examples of partial fracture, but that the number of bony fibres, which have given way is too inconsiderable, as compared with those not broken, to affect materially the elasticity of the bone.

Diagnosis.—The diagnosis will depend somewhat upon the history of the accident as well as upon the present symptoms. In no instance, where I could ascertain the cause, have I known an incomplete fracture of this variety produced by any other than an indirect blow; and where the clavicle has been the seat of the curvature, the counter-blow has been received upon the end of the shoulder. This fact possesses, therefore, equal significance in its relation to either of the varieties of partial fracture; but in the case of a partial fracture, with a permanent curvature, the diagnosis would be complete without the history, while in this case it might not be, and a knowledge of the manner in which the accident occurred would, therefore, be of great importance.

The signs, then, after a knowledge of the fact that a blow has been received upon the shoulder, are a node-like swelling upon the anterior or upper face of the clavicle, generally in its middle-third, this swelling being hard, smooth, oblong; the skin only slightly or not at all swollen or tender, and in no way discolored, as it would have been had the swelling upon the bone been the result of a direct blow; and the line of the axis of the bone unchanged. I have never detected motion or crepitus at the point of injury, yet we have seen that Blandin was able to detect both in one instance; nor has it ever occurred to me to see the swelling upon the bone until two or three days after the injury was received. We are not likely, therefore, to recognize this accident immediately after its occurrence.

Treatment.—In the case of the clavicle, neither bandages, slings, compresses, nor lotions can be of much service. The utmost that can be necessary is to enjoin some degree of care in using the arm of the injured side. The consolidation will be speedily accomplished, and after a time the ensheathing callus will wholly disappear.

If a similar accident should occur in any other of the long bones, as retentive and precautionary means, splints might be applied, at least for a few days.

2. *Partial fracture, without immediate and spontaneous restoration of the bone to its natural form.*—The causes of this accident are the same with those which produce simple bending, or partial fracture with immediate and spontaneous restoration; from which latter they differ, probably, in the greater extent of the bony lesion. Perhaps, also, they differ sometimes in the

peculiar form and degree of the denticulation at the seat of the fracture; in consequence of which an antagonism of the fibres takes place, preventing a restoration of the bone to its original form.

They constitute a large majority of those examples of partial fractures which come under our observation in the various long bones. In seventy-two fractures of the clavicle, it has been observed by me thirteen times, or once in five and seven-thirteenth times. In one hundred and eighty-eight fractures of the radius and ulna, it has occurred twelve times, or once in fifteen and two-third times. The following are the exact observations upon which this latter statement rests:—

Fractures of the radius alone, fifty-four; no partial fractures.

Fractures of the ulna alone, thirty; no partial fractures.

Fractures of both bones at once, fifty-two (one hundred and four fractures); twelve partial fractures.

The one hundred and four fractures last enumerated, were as follows: —

Radius and ulna both partially broken five times; ten partial fractures.

Radius partially broken and ulna completely, once.

Ulna partially broken and radius completely, once.

It has not occurred to me to meet with this fracture in any other bone; but examples have been mentioned as having occurred in the humerus, ribs, femur, tibia, and fibula.

Very few surgeons have spoken of partial fractures in the clavicle; while Jurine, Symes, Liston, Miller, Norris, and many others, have declared that it is much more frequent in the bones of the forearm than elsewhere. This does not agree with my experience, according to which it occurs oftener in the clavicle than in the forearm: a discrepancy which I can not very well explain, except by supposing that in the case of the clavicle the accident has either been overlooked entirely, or misapprehended. Blandin, whom we have seen has reported five cases of partial fracture of the clavicle with immediate restoration, states distinctly that in two of these cases distinguished surgeons of Hôpital Beaujon, and Hôtel Dieu, failed to recognize it.

Says Turner:—"The next I shall descend to is that of the clavicle, or collar bone, which I have found the most frequently overlooked, I think, of any other, till it has been sometimes too late to remedy, especially among the children of poor people; for though they find these little ones to wince, scream, or cry, upon the taking off or putting on their clothes, yet seeing that they suffer the handling of their wrists and arms, though it be with pain, they suspect only some sprain or wrench, that will go away of itself, without regarding anything farther

or looking out for help; whereas, this fracture discovers itself as easily as most others. For not only the eye, in examining or taking a view of the part, may plainly perceive a bunching out or protuberance of the bones, when the neck is bared for that purpose, with a sinking down in the middle or on one side thereof, which will be still more obvious on comparing it with its fellow on the other side; but when it is more obscure, and the bone, as it were, cracked only—a *semi-fracture* as we say,—yet, by pressing hard upon the part, from one extremity to the other, you will find your patient crying out when you come upon the place; and by your fingers, so examining, sometimes perceive a sinking farther down, with a crackling of the bone itself."*

Erichsen, who regards all of these cases as mere bendings of the bones, remarks that it "most commonly occurs in the long bones, especially the clavicle, the radius, and the femur."† He says, moreover, "fracture of the clavicle in infants not unfrequently occurs, and is apt to be overlooked. The child cries and suffers pain whenever the arm is moved. On examination, an irregularity, with some protuberance, will be felt about the centre of the bone."‡ The reader will not fail to recognize in these symptoms, the incomplete fracture of which we are now speaking, although Erichsen evidently believes them to be examples of complete fracture.

In addition to this testimony as to the frequency of these fractures in the clavicle, I will only mention that Johnson, in his review of Markham's *Observations on the Surgical Practice of Paris*, says that "many surgeons have noticed the incomplete fracture of the clavicle, as of other bones, which take place in the young."§

Pathology.—The following experiments will assist in the elucidation of this point of our subject:—

Experiment 1.—I bent the leg of a chicken five weeks old. It cracked under my fingers, and remained bent. Having waited a few seconds, and finding that it was not restored to position, I pressed upon it and made it straight. The chicken walked off without any limp.

On the fourth day, before dissection, the bone looked as if it was still bent; but on removing the soft parts, the line of the axis of the bone was found to be straight. The areolar tissue under the skin was infiltrated with lymph, which was most

* *Art of Surgery;* by DANIEL TURNER. London, 1742, vol. 2, p. 255.

† *Science and Art of Surgery.* Phila. ed., 1854; p. 180.

‡ Ibid; p. 205.

§ *Lond. Med. Chir. Rev.;* vol. 34, p. 476; 1841.

abundant near the fracture, and gradually diminished toward each extremity of the limb. This effusion was confined almost entirely to the front of the limb, or to that side which had been broken, and constituted the greater part of the enlargement which I had noticed before the dissection was commenced, and which then felt like bone.

On the front of the bone, also, underneath the periosteum, there was a loose, honey-comb deposit of ensheathing callus, about one line in thickness, and extending upward and downward about half an inch. This callus surrounded the bone in three-fourths of its circumference; but there was no callus on its posterior surface. It was also deficient exactly along the line of fracture, in front and on the sides, in consequence of which an oblique groove remained, indicating the seat of the fracture.

Experiment 2.—I produced a partial fracture, at the same point, in a chicken five weeks old. Felt the bone crack. The bone would not straighten spontaneously, and I immediately bent it back to its place.

On the eighth day I dissected the limb. The appearances, before and after dissection, were the same as in Experiment 1. No ensheathing callus on the posterior surface. The furrow over the line of fracture was not quite so deep as in Experiment 1. On opening into the centre of the shaft, I found the canal nearly filled with bony matter opposite the fracture, and the broken ends were completely united.

Experiment 3.—This was made upon the opposite leg of the same chicken, and with the same results.

Experiment 4.—Same as Experiment 1, except that I supposed at first the bone was broken completely off. The dissection showed, however, that such was not the fact. The posterior wall was a little thickened, but the ensheathing callus was only in front and on the two sides. The medullary canal was closed with bone.

So early as the year 1673, a dissection made by Glaser, demonstrated incontestibly the existence of partial fractures in the shaft, and in the direction of the diameter of long bones.* Camper, in 1765, again described a specimen which he had seen;† and Bonn, in 1783, added a third positive observation.‡

M. Gimele is, therefore, in error when he ascribes to Cam-

* MALGAIGNE, op. cit., p. 44; from *Th. Boneti Sepulchretum*, 1700; tom. 3, p. 424.

† *Essays and Obs. Phys. and Lit. of Soc. of Edinburgh*, 1771; vol. 3, p. 537; also, MALGAIGNE, op. cit., p. 44.

‡ MALGAIGNE, op. cit., p. 44; from *Descript. Thes. Ossium Morb. Hoviani*, 1783, No. 185.

paignac the credit of having first proven by dissection their existence, in a paper communicated to the Academy of Medicine at Paris, in 1826. Campaignac, however, seems to have been the first who described very particularly the condition of this fracture. He has recorded the history and dissection of two cases, one of which occurred in the fibula, and one in the tibia. The first of these cases was a girl twelve years old, who survived the accident just eight weeks. The fracture had occurred near the middle of the bone, and upon the anterior and internal side; in which direction, resting against the tibia, the bone was found inclined. "The bony fibres had been broken at different lengths, almost exactly like what takes place in the branch of a tree which has been partially broken; and, as we see sometimes in this latter case, the bundles of splintered bony fibres abutted upon themselves, and did not take their places when we endeavored to restore them; so the abnormal angle which the fibula represented could not be effaced, the ends of the divided fasciculi not restoring themselves to their respective places. This disposition might be especially seen toward the anterior part of the internal face, where a packet of fibres, coming from below, was braced against the upper lip of the division, which it thus held open. This opening at first made me think that the fragments could not have been well consolidated; but I assured myself that it was, and the fact was subsequently confirmed by the Academy of Medicine; all the points which were in contact were found intimately united." *

Diagnosis.—The diagnosis is not difficult. The distortion indicates sufficiently the existence of a fracture, while the complete absence of crepitus in nearly all cases, and of either overlapping or lateral displacement, must, generally, especially where the accident has occurred in a child, sufficiently indicate that the fracture is incomplete. It will assist the diagnosis also to notice that these accidents are almost confined to the middle third of the long bones; and they are produced usually by a bending of the bones, the forces operating upon the extremities of the bones, and not directly upon the point which is broken.

In complete fractures, also, preternatural mobility is so constant a sign as to be regarded as diagnostic, while here there is almost always a great degree of immobility at the seat of fracture. The angle made by the projecting extremities is usually rather gentle and smooth; at other times it is abrupt, indicating a greater amount of fracture, or that the outer fibres

* *Des Fractures Incomplètes et des Fractures Longitudinales des os des Membres*; par J. A. J. Campaignac. Paris, 1829, pp. 9–10.

are broken more irregularly. The power of using the limb is generally sensibly impaired, but not completely lost.

Treatment.—Jurine, Murat, Campaignac, Gulliver, Malgaigne, with some others, have noticed the fact that it is often difficult, and sometimes quite impossible, to restore these bones to position; a circumstance which they have justly ascribed to that condition of the fragments described by Campaignac. The broken extremities of the fasciculi become braced against each other, and effectually resist all efforts to straighten the bone; unless, indeed, so much force is used as to render the fracture complete; a result which, if it should chance to happen, need not occasion any alarm, since, while it enables us at once to restore the bone to line, it does not much increase the danger of lateral displacement and overlapping. That the fracture has become complete we may know by a sudden sensation of cracking, by the increased mobility, and by the crepitus which is now easily developed.

But we need not, on the other hand, be over anxious to straighten the bone completely, since experience has shown that after the lapse of a few weeks or months the natural form is usually restored spontaneously. I am not now speaking of those cases in which the restoration occurs immediately, where it is probable that the splintered fibres offer no resistance to the restoration; but only of those in which the bone straightens so gradually as to induce a belief that the broken ends are the cause of the resistance. To this variety of accident belong cases one, five, six, seven, and eight, published in my *Report on Deformities after Fractures;** in one of which the natural axis was resumed in less than four weeks. In a case mentioned by Gulliver, it required about the same time to render the bones of the forearm perfectly straight; while in one case mentioned by Jurine, at the end of six months it was "difficult to say which arm had been broken, and at the end of one year it was impossible."

Jurine attributes this restoration to "muscular action, or more especially to the reaction of the compressed bony plates:" but while it is easy to understand how the reaction of the compressed fibres may accomplish the gradual restoration, I am unable to understand in what manner muscular action contributes to this result, since most of the muscles attached to the long bones operate so much more energetically in the direction of their axis than in the direction of their diameters. Indeed, we have often seen these bones bent after complete fractures, and before the union was consummated, by muscular action alone.

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* *Trans. Am. Med. Assoc.*, vol. 8, 1855, pp. 392-5.

I repeat, then, that the gradual restoration of these bones is due to the same circumstance which produces at other times an immediate restoration, namely, the elasticity of the unbroken fibres, but which elasticity, in this latter instance, is, for a time, effectually resisted by the bracing of the broken fibres. At length, however, in consequence of the gradual absorption of the broken ends, this resistance is removed, and the bone becomes straight. If this absorption refuses to take place, and the fibres continue pressed forcibly against each other, as in the case described by Campaignac, then the bone remains permanently bent.

Having straightened the bone as far as is practicable, it only remains to secure the fragments in place by suitable bandages or splints. If the restoration is incomplete, these means may assist the efforts of nature in accomplishing a gradual restoration.

It is scarcely necessary to say that extension and counter-extension avail nothing in partial fracture.

Sect. 3.—Fissures.

These constitute the second principal form of incomplete fractures; or those in which the fracture is accompanied with no appreciable bending; which occur almost exclusively in inflexible bones, such as the compact bones of adults, and more often in the direction of their axes than of their diameters. They are complete so far as they extend, but they do not completely sever the bone so as to form two distinct fragments. They have been most frequently observed in the flat bones, such as the bones of the skull, and in the upper bones of the face; occasionally in the long bones, both in their diaphyses and epiphyses, and rarely in the short bones.

M. Gariel has reported, in the *Bulletins de la Société Anat.*, for 1835, a case of fissure of the inferior maxilla, occurring in a lad sixteen or eighteen years old.* Palletta found a fissure extending partly through the third dorsal vertebra, in a man who had fallen upon his back eleven days before; and M. Lisfranc has mentioned a remarkable case of fissure and partial fracture, with bending of five ribs in the same person.† Malgaigne believes that he has seen one example of this variety of incomplete fracture of the scapula, occurring through a portion of the infra-spinatus region. I have myself recorded another in my *Report of Deformities after Fractures*, as having been found

* *Bulletins de la Société. Anat.*, 1835. Also *Traité des Frac. et Lux.* par L. F. Malgaigne, tom. 1, p. 34.

† *Des Fract. Incomplet. et des Fissures;* par J. A. J. Campaignac, 1829, p. 20.

in the skeleton of Nimham, an Oneida Indian, who was a great fighter, and who "died when about forty-five years old, in consequence of severe injuries received in a street brawl; but his death did not occur until four or five months after the receipt of the injuries.

"In addition to this fracture of the right scapula, five of his ribs were broken, and both legs, all of which, except the scapula, had united completely by intermediate and ensheathing callus.

"The scapula is broken nearly transversely, commencing upon the posterior margin at a point about three-quarters of an inch below the spine, and extending across the body of the bone one inch and three-quarters, in a direction inclining a little upward, irregularly denticulate and without comminution. The fragments are in exact apposition, and, throughout most of their extent, in immediate contact. They are, however, not consolidated at any point, but upon either side of the fissure there is a ridge of ensheathing callus, of from one to three or four lines in breadth, and of half a line or less in thickness along the broken margin, from which point it subsides gradually to the level of the sound bone. The same is observed upon the inner as well as upon the outer surface of the scapula. This callus has assumed the character of complete bone, but it is more light and spongy than the natural tissue, and the outer surface has not yet become lamellated. Its blood-canals and bone-cells open everywhere upon the surface.

"Directly over the fracture, and between its opposing edges, no callus exists, but as the bone had lain some time in the earth before it was exhumed, it is probable that a less completely organized intermediate callus had occupied this space, and that, owing to the less proportion of earthy matter which it contained, it had become decomposed and had been removed."*

M. Voillemier found the head of the humerus penetrated by two or three fissures;† and M. Campaignac has reported a case in which a lad ten or twelve years old, having been compelled to submit to amputation of his arm at the shoulder joint, in consequence of a severe injury, the humerus was found fissured from the insertion of the deltoid to near the condyles, extending through the entire thickness of the bone, and the edges of the fissure so much separated toward its lower extremity as to admit the blade of a knife.‡ Chaussier has related a case in which a criminal, who died soon after having submitted to the torture, was found to have a nearly longitudinal fissure of the

* *Trans. Amer. Med. Assoc.*, vol. 9, p. 82, 1856.

† MALGAIGNE, op. cit., p. 35.

‡ CAMPAIGNAC, *Des Fract. Incom., etc.*, p. 24, 1829.

radius in its upper fourth, and which penetrated half way through the thickness of the bone.* Gulliver saw a fissure in the pelvis of an infant.† Malgaigne has seen two specimens of this fracture in the iliac bones, both of which belonged, as he thinks, to adults; in one, the fissure was limited to the internal table;‡ and in the case of the lad reported by Gariel, as having a fissure of the inferior maxilla, there was also found a fissure of the left ilium, but which was limited to the outer table.§

M. J. Cloquet has mentioned a case of fissure of the shaft of the femur passing through the condyles and extending upward to near the middle of the bone. The fissure was produced by a bullet, which had completely traversed the bone from behind forward, a little above the condyles.‖ M. Malgaigne has also represented, in one of his plates, a fissure of the femur extending along the front of the femur, somewhat irregularly, from a point a little below the trochanter minor to near the condyles.¶ The bone was presented to the Museum of Val-de-Grâce, by M. Fleury; but it is to be regretted that we have no farther account of this remarkable specimen. Certainly, in the complete absence of any farther history of the case, one might be justified in expressing a doubt whether it was not a fissure occasioned by the contraction consequent upon exposure and drying after death.

The following account of a fissure of the neck of the femur, of the same character with those which now occupy our attention, is copied from the proceedings of the "Boston Soc. for Med. Improvement," at its regular meeting in September, 1856:

"*Partial Fracture of the Neck of the Femur in a man æt. 44 years.*—Specimen shown by Dr. JACKSON.—The fracture, which appears as a mere crack in the bone, commences anteriorly just above, but very near to, the insertion of the capsular ligament, runs along this insertion for about an inch, and then extends directly upward to the margin of the head of the bone. From this last point it crosses the upper surface of the neck almost in a straight line, and at a little distance from the margin of the head, but afterward approaches very closely to this margin posteriorly; it then turns downward and obliquely forward, and stops at a point about half way between the small trochanter and the head of the femur, and two-thirds of an inch or more anteriorly to the line of this trochanter. The fracture

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* *Méd. Legale*, p. 447, et seq. Also MALGAIGNE, op. cit., p. 37.

† *Gazette Méd.*, 1835, p. 472.

‡ Op. cit., p. 34.

§ *Bulletins de la Soc. Anat.*, 1835, p. 24 Also MALGAIGNE, op. cit,, p. 34.

‖ *Thèse du Concours de Pathol. Externe*, 1831, pl. xii., fig. 7. Also, *Des Frac. etc., par* CAMPAIGNAC, 1829, p. 19.

¶ Op. cit., p 37, pl. 1, fig. 1.

then involves about three-fourths of the neck of the bone; the inner-anterior portion only being spared. There is considerable motion between the neck and the shaft, and the fracture could, undoubtedly, be completed without the application of any extraordinary force. Dr. J. referred to other cases of partial fracture; but a fracture of this sort, as occurring in this situation, and in a fully adult subject, he believed had never before been described. There was, also, in this case, a transverse fracture of the same femur midway, with a split extending upward nearly to the neck of the bone; and still further, a fracture of the spine. The patient, a laboring man, fell through two stories of a building and down upon a hard floor. On the same day he entered the Massachusetts General Hospital, and on the 18th day from the time of the accident he died. The femur is perfectly healthy in structure, and no changes are observable in the bone about the fracture."*

Whatever doubts may have been thrown upon the possibility of this accident, as applied to the neck of the femur, by the ingenious arguments of Robert Smith, of Dublin,† the question is now at least determined by an incontestible fact. Dr. Smith had rendered it quite probable that both Colles and Adams were mistaken, and that the cases described by them were examples of impacted fracture, and not of partial fracture; but, in arguing the improbability of its occurrence, from the infrequency of fractures of the neck of the femur in early life, he overlooked the fact that there were two forms of incomplete fractures; and that, it was only the "green stick" fracture which belonged mostly to childhood; "fissures" being found most often in the bones of adults. Indeed, I think the example recorded by Tournel in the *Archives de Medicine*, had already, so early as the year 1837, established the possibility of a "fissure" in the neck of the femur; although by Malgaigne this case has been mentioned as an example of that other variety of partial fractures, which is almost peculiar to childhood, and in which the bones yield quite as much by bending as by breaking. But the man was eighty-five years old, and, having died three months and a half after the accident, a long crevice was found, extending nearly through the neck of the femur, partly within and partly without the capsule.

I have seen, in Dr. Mutter's valuable collection of bones at Philadelphia, a specimen of fissure of the trochanter major, which, it is believed, occasioned the death of the patient by hæmorrhage.

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* *Bost. Med. and Surg. Jour.*, vol. 55, p. 351. See, also, *Amer. Jour. Med. Sci.*, for 1857, p. 306; with engraving.

† *Treatise on Fractures in the Vicinity of Joints, etc.*; by ROBERT WM. SMITH, Dublin. 1854; p. 44, et seq.

Gulliver says there is an example of a fissure in a patella belonging to the museum of the Edinburg College of Surgeons; the fissure traversing its articular face only.*

The first example of a fissure of the tibia is recorded by Corn. Stalpart Vander-Wiel, in 1687; and indeed this is, according to Campaignac, the first exact observation of this species of fracture which our science possesses, although its existence had been recognized by the most ancient authors. A servant had been kicked by a horse, and after a time, pain continuing in the limb, his surgeon, Dufoix, suspected a fissure of the tibia, and having cut down to the bone, a cure was soon effected.†

In the Dupuytren Museum, at Paris, there are two tibiæ with linear fractures; one without history, and the other presented by MM. Marjolin and Rullier, "and which had been broken by a ball."‡ In the example related by Campaignac, a woman, having leaped from a second-story window, died immediately, and upon examination she was found to have three fissures in the upper portion of the left tibia, one only of which entered the articulation.§

The soldier spoken of by Bécane, having been struck upon the middle of the tibia, continued to march for some distance; but serious complications ensuing, he finally died. A fissure was found, after death, near the middle of the shaft of the tibia.‖

Léveille relates that an Austrian soldier had his leg penetrated by a ball at the battle of Marengo, from thence he marched several miles, and then was transported to Pavia. Although the wound at first seemed very simple, graver symptoms soon followed, and it became necessary to amputate the thigh. Dissection showed that the ball had occasioned several oblique and longitudinal fissures, which extended nearly the whole length of the shaft of the bone.¶

Duverney saw a priest who had fallen and bruised the middle of his left leg; the swelling and pain consequent upon which were subdued after a few days. The patient believed himself cured and acted accordingly. Suddenly, in the night, he was seized with an acute pain in the limb; and on cutting down to the bone, a bloody serum escaped from between it and the periosteum, and the bone was discovered to be fissured longitudin-

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* Malgaigne, op. cit., p. 35.

† *Des Fractures Incom. et des Fractures Longitudinales, des os des Membres*, par J. A. J. Campaignac; a Paris, 1829; p. 17.

‡ Malgaigne, op. cit., p. 36.

§ *Des Fractures incomplètes*, etc., p. 21.

‖ *Abregé des Maladies qui attaquent la substance des os*; Toulouse, 1775, p. 134. Also Malgaigne, op. cit., p. 39.

¶ Malgaigne, op. cit., p. 39.

ally. Subsequently the tibia was trephined, but the fissure did not reach the marrow. He recovered completely in less than two months.

The same writer mentions another case in which a soldier received the kick of a horse in the middle of his left leg which was followed immediately by great pain, and subsequently by much inflammation, and even gangrene of the skin. The wound, however, cicatrized kindly, but after three months he was seized suddenly with a severe pain in the limb; and, after the trial of many remedies, resort was finally had to the knife, when the tibia was seen to be discolored, and cracked longitudinally. On the following day the bone was opened over the course of the fissure with a chisel and mallet, and the patient was at once relieved by the escape of a yellowish and very offensive matter. At the next dressing, the bone was opened more freely by several applications of the trephine, and an abscess was exposed in the centre of the bone. The patient finally recovered after about four months.* M. Campaignac saw, also, at the Hospital La Charité, the tibia of a woman, æt. 38 years, upon which were found four fissures; the report of which case is accompanied with wood cut illustration.†

Fissures may occur probably at all periods of life, but they are more frequently found in the bones of adults. Campaignac, however, mentions a fissure of the humerus in a child ten or twelve years old, and Gulliver has seen a fissure in the pelvis of an infant.

Etiology.—They may be occasioned by most of those causes which produce fractures in general, such as direct or indirect shocks; but they are occasioned much more often by direct blows, especially when inflicted upon bones imperfectly covered by soft parts, such as the tibia. Bullets, having violently struck or penetrated the bone, have frequently occasioned fissures.

Their course may be parallel with the axis of the bone, or oblique or transverse; they are often multiple; some merely enter the outer lamina, others open into the cellular tissue, and others still divide both surfaces of the bone through and through; and, according as they penetrate more or less deeply the bone, their lips will be found to be more or less separated. They frequently extend into the joint surfaces.

Diagnosis.—The signs which indicate the existence of a fissure must, in a large majority of cases, be insufficient to determine fully the diagnosis during the life of the patient. It is not probable that such fissures could ever be clearly made out by the touch alone, where the skin is not broken, since the pain,

* MALGAIGNE, op. cit., p. 39, et seq.

† CAMPAIGNAC, op. cit., pp. 21–22.

swelling, suppuration, etc., are only characteristic of inflammation of the bone or of its coverings, and might be equally present whether a fracture existed or not. In those rare cases only in which the flesh is torn off, and the surface of the bone is brought directly under the observation of the eye, will the diagnosis become certain.

Treatment.—Fortunately, an error in judgment in this matter will not materially, if at all, prejudice the interests of the patient; since whatever may be the fact in other respects, if the bone, or its periosteum, or its medullary membrane, are inflamed, and rest, with antiphlogistics, do not accomplish its speedy resolution, incisions and perforations become inevitable, if we would give either safety or relief to the sufferer. Accordingly, in the inflammation and suppuration consequent upon these fractures, we have seen that it has been occasionally found necessary to lay open the soft tissues freely, and even to trephine the bone at one or more points. I have once met with a fissure in the thyroid cartilage, which constitutes, so far as I know, the only example upon record of a fissure in cartilage.*

Art. IV.—*An Account of an Anomalous Situation of the Left Kidney, in the Cavity of the Pelvis.* By C. E. Isaacs, M.D., Demonstrator of Anatomy in the University of the City of New York, etc., etc.

By the kindness of Dr. H. S. Smith, one of the physicians of the Brooklyn City Hospital, I was enabled to make a post-mortem examination of the body of a negro, æt. 35 years, who died of phthisis, in that institution. On opening his abdomen, I found the right kidney somewhat larger, and situated rather lower down, than usual. On searching in the *left* lumbar region, I could not discover the kidney, but soon ascertained that this organ was located in the cavity of the pelvis. Its superior extremity was in contact with the bifurcation of the abdominal aorta. The inferior touched the posterior surface of the bladder. The upper surface of the kidney was crossed by the sigmoid flexure of the colon. The inferior surface reposed upon the left common iliac artery and vein, upon the left internal, and the left external iliac artery, and the corresponding veins; also upon the fifth lumbar vertebra, and the first, second, and third pieces of the sacrum—cellular tissue and vessels intervening.

The right edge of the kidney was in contact with the rectum—the left with the iliac portion of the brim of the pelvis.

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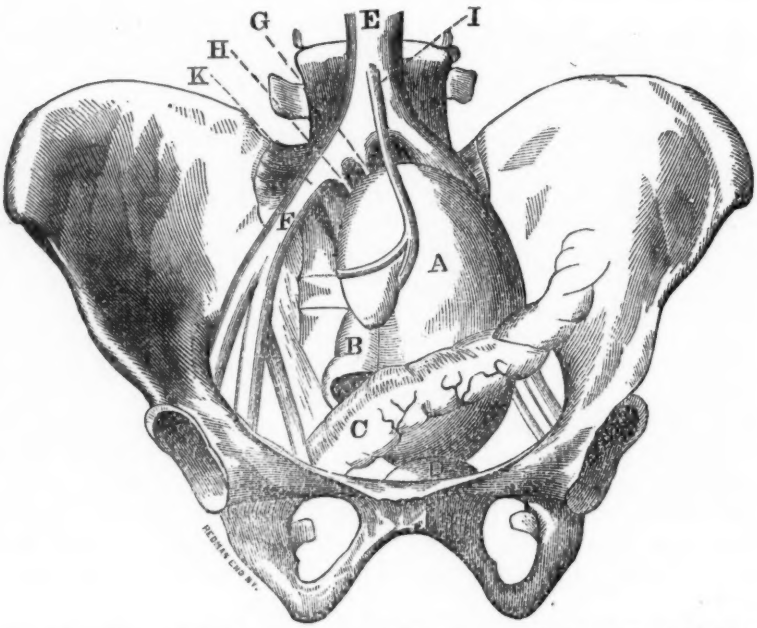
* See *Buffalo Med. Jour.*, vol. xiii. Article entitled *Fracture of the Thyroid Cartilage.*

There were three renal arteries, one of the size of a crow's quill, coming off from the abdominal aorta, the others were branches of the right common iliac, and were about the size of the radial arteries.

The renal vein entered the vena cava, at the point of its formation, by the two common iliac veins. The kidney was of the ordinary size. The left supra renal capsule was twice as large as usual, and of the shape of a fig leaf. It occupied its normal position in the lumbar region. Although cases are on record of the anomalous situation of the kidney in the cavity of the pelvis, yet it is believed that they are of sufficient rarity to demand a careful record of the facts.

Moreover, in this instance, had the kidney been the seat of extensive pathological changes, as cancer, abscess, etc., etc., it might have seriously interfered with the functions of the bladder, the sigmoid flexure and rectum, and also with the return of venous blood. Under these circumstances, it is evident that a correct diagnosis would have been extremely difficult, and, in all probability, impossible.



A, left kidney. B, ureter. C, sigmoid flexure. D, bladder. E, abdominal aorta. F, right common iliac. G and H, two arteries going off from it to the kidney. I, a renal artery from the abdominal aorta. K, the renal vein.

ART. V.—*On the Communicability of Syphilis from the Nursling to the Nurse.* By J. LEWIS SMITH, M.D., Physician to the North Western Dispensary, N. Y.

SYPHILIS, on account of its great prevalence and its protean forms, has received a large share of attention from the medical profession since the days of Hunter. Comparatively little notice has, however, been taken of the congenital variety of the affection, although this is the most destructive to human life. Among those who have contributed most to our understanding of infantile syphilis, we may place Egan, Hey, and Colles, of the British Surgeons; Bertin, Dubois, Trousseau, Bouchut, and Waller, on the continent; and, in this country, Dr. Bulkley.

On account of the meagerness of the literature of congenital syphilis, a sketch of the following case, especially as it throws light on one or two points in reference to the disease still undecided, may prove instructive:—

September 29, 1856.—A male infant, five months old, was brought to the North Western Dispensary for treatment; the woman who had charge of him stated, that she was his wet nurse, that his mother was a young unmarried lady, apparently healthy, and his father a sea captain, of whose condition she was ignorant. The child presented no unusual symptom or appearance, till it had attained the age of nine weeks, when maculæ appeared on his face, limbs, and, more scantily, upon his trunk, about the size of, but of a more dusky appearance than, those in measles; he progressively lost flesh and his wonted cheerfulness; his voice grew hoarse; his surface brown and dusky; and ulcers appeared around the anus. This condition continued, with little alteration, till the time of the visit at the Dispensary. The nurse also expressed her belief that she had been infected by the child; her health was good till about two months after the above-mentioned symptoms appeared in him, when her nipples and the angles of her mouth became excoriated, and soon after an eruption appeared on each forearm; no application made to the affected parts had been of the least service. The syphilitic character of the disease in the child was very apparent. On examining the woman, I found her in the condition described by Colles and others, as occurring in nurses to whom syphilis has been communicated by lactation; the nipples from their apices to a point beyond their bases were fissured, abraded, and moist, and both angles of the mouth were excoriated and apparently very tender; the eruption on the forearm was psoriasis. I prescribed for the nurse hydrarg. proto-iod. gr. $\frac{3}{4}$ twice daily.

October 3.—The lips of the nurse seem a little better; otherwise her condition, as well as that of the child, is about the

same. Continue treatment of nurse, and give to child hydrarg. chlor. corros. gr. 1-64 three times daily.

November 3.—The maculæ on the child are scarcely perceptible; condition of nurse about the same. ℞. Hyd. chlor. corros. gr. 1-16 three times daily to nurse; no treatment of child.

January 14.—Have not seen the patients since the last record till to-day; both have improved, the child seems entirely well, with the exception of the ulcers around the anus; the lips of the nurse have healed, and she has recovered from the psoriasis, but of late she has been subject to pain in the limbs; the child is cheerful, his surface of good complexion, his voice natural, and he has recovered the usual rotundity of infancy.

This case is mainly interesting on account of the support it lends to the doctrine of the transmissibility of constitutional syphilis by lactation. It is well known that Ricord, in consequence of the negative results of his experiments, has for years believed and taught that the primary is the only communicable form of the disease; but, as time rolls on, facts accumulate to disprove or modify the teachings of this high authority. Dr. Tyler Smith, in his recent work on leucorrhea, pretty conclusively establishes the doctrine, that the wife, though she has lived for years with a diseased husband without being contaminated, may finally receive the syphilitic poison through the medium of the embryo, and if the general principle asserted by Ricord is proved incorrect in certain instances, it is a fair question whether it may not also be in others. There is reason to believe that, if the placental circulation may be the channel through which the mother receives the poison, she is also liable to receive it by suckling a diseased child, especially if her nipples, be excoriated. There are many eminent and careful observers who believe in this doctrine, and in the literature of syphilis are records of many cases which can not be well explained on any other supposition.

Among the most elaborate treatises on congenital syphilis, is that of M. Bouchut, published in his work on *Diseases of Children;* and as it is one of the latest, it probably contains the best collection of facts on the topics discussed, of any Continental publication. This author has collated, mainly from the French journals, records of ten cases, in which syphilis is believed to have been communicated from the nursling to the nurse, or vice versa. Dr. Bird, the English editor of Bouchut's work, cites the opinion of Hey, Colles, and other eminent British observers who believe in the transmissibility, and adduce cases in support of their views. The collective evidence brought forward by author and editor is the most complete of any with which I am acquainted, but, in the medical

journals are records of the following important cases, to which these writers make no allusion.

In the London *Medical Times* for June, 1845, Dr. King relates the case of a Mrs. P., the mother of several healthy children. Her husband contracted syphilis, and, although he underwent partial treatment for it, their next child died at the age of ten weeks of well-marked syphilitic symptoms. After the death of this infant, Mrs. P. gave suck to a twin child, six months old, belonging to a neighbor, itself, the other twin, and both parents having excellent health. A few weeks subsequently, the adopted infant became covered with syphilitic blotches, and after being cured by Plummer's pill, was returned home. After this, Mrs. P. was twice confined; both children were diseased; the one wasting away, and dying at the age of twelve months; the other presenting copper-colored blotches, for which anti-syphilitic measures were employed, but with what success is not mentioned. That the infant suckled by Mrs. P. did not receive the disease from its own parents, is evident from their continued health, the health of the other twin, and the date of the appearance of the syphilitic blotches.

In the *Medical Gazette* for June, 1842, Dr. Lowdell relates the case of a Mrs. B., whom he was called to treat for an unhealthy-looking ulcer on one nipple. Subsequently the dusky copper-colored eruption characteristic of syphilis appeared on one side of her chest, and her tonsils ulcerated. An eruption also occurred on her infant of a leprous type. Dr. Lowdell ascertained that this lady and her child had enjoyed good health till she gave suck to the illegitimate infant of a servant girl living in the neighborhood. This infant, a miserable and sickly creature, soon died, probably tainted by syphilis.

The history of the case is not yet complete. Mrs. A., a married lady, but without children, in whose house the girl was confined, had allowed the infant to apply its lips to her nipple, which, like those of Mrs. B., became affected with ulcers apparently of a specific character.

Another case is recorded by Dr. Bulkley, in his elaborate article on congenital syphilis, published in the New York *Journal of Medicine and Surgery*, for October, 1840, showing "the communication of the infection by the infant by inoculation of the breast, in two instances entirely independent of each other, in the first place to a woman, who afterward gave birth to one dead child and two infected ones; and, in the second case, by one of these children to a perfectly healthy nurse, the disease in both cases first exhibiting itself in sores on the breast."

In the *Medico-Chirurg. Rev.*, for July, 1829, is related the history of a woman, æt. 40 years, who was admitted into St.

Thomas' Hospital for an elevated sore on the left breast, thought to be syphilitic. A subsequent attack of iritis confirmed this opinion. The patient stated that she was healthy till she gave suck to a child whose mother was known to have had syphilis.

Dr. Wm. Campbell, in an article on congenital syphilis, published in the *Northern Journal of Medicine*, for May, 1844, remarks: "I have seen several instances in which a diseased infant contaminated a perfectly healthy nurse. In one of these cases, where there were ulcers in the child's mouth, the breasts, and thereafter the whole system, of the nurse were affected, and that in so short a period of time as to be scarcely credible. On a Sunday afternoon this individual received to nurse a twin infant, born of a parent who had been contaminated by her husband, but in whom the complaint was thought to be perfectly removed by the iodide of potassium, and although, from the disease having appeared in the child, it was returned to its mother on the Thursday following, the nurse was, nevertheless, contaminated; the mammæ became affected with copper-colored blotches, and the nipples surrounded by chaps and small ulcers."

These cases, with those cited by M. Bouchut and Dr. Bird, amounting to more than twenty, most of which were carefully observed and recorded, render it highly probable that constitutional syphilis is communicable by lactation. This doctrine receives strength from the fact that, in those cases where the nurse was supposed to receive the infection from the child her breasts are commonly the parts first diseased.

The mercurial treatment, under which the infant, whose case we have narrated, was placed, would no doubt have proved more speedily effectual had it not been omitted during the long intervals of absence from the Dispensary. The profession agree that no remedy is as efficacious in the treatment of congenital syphilis as the mercurial preparations, though there is not equal unanimity as to the proper mode of exhibiting them. Some have given minute doses of calomel to the infant. This was the practice of Hey, of Leeds. Dr. Golding Bird recommended two grain doses of hyd. cum. cret., continued for a fortnight, at which time the eruption commonly fades, and then potas. iod. gr. i. three times daily. He states: "I have not treated any case by the iodide of potassium alone, although this drug appeared to be of peculiar service after the mercury had produced a decided effect on the system."* Trousseau has been in the habit of prescribing a bath of corrosive sublimate to both mother and child, and the same medicine internally to the latter, in doses of about one-sixtieth of a grain. Some treat the dis-

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GUY'S *Hosp. Reports*, April, 1845.

ease by the exhibition of a mercurial, usually corrosive sublimate, or the proto-iodide of mercury to the nurse, the medicine affecting the child through the medium of the milk. Others, among whom are eminent names in medicine, disapprove of the internal treatment of congenital syphilis, believing that mercurial doses derange the primæ viæ and impair nutrition. These physicians employ mercurial inunction. It appears that mercury, whether given to the nurse or the child, or employed by inunction, proves effectual in the end, and there is probably not much choice between the various methods of its use. It is not the general experience of the profession that the moderate internal employment of the remedy impairs the digestive organs of the child. On the contrary, under its continuance the little patient, if not too long neglected, loses his emaciation, and returns to the state of healthy nutrition. Among British physicians the hyd. cum. cret. is frequently administered to the infant, and from its mildness and efficiency it is probably as good a form as any in which the mercurial can be exhibited.

ART. VI.—*Case of Apoplexy.* By GEO. T. ELLIOT, JR., M.D. Physician to Bellevue Hospital.

PETER HORSAY, a powerfully built, middle-aged Irishman, was carried into Bellevue Hospital at noon, on March 13, 1857, collapsed, and utterly unconscious.

No pulse at either wrist, but in the brachial arteries beating from forty to fifty in the minute. No evidences of injury to trunk or limbs; but, on left side of head an abrasion about one inch in breadth extends from middle of frontal bone to parietal eminence, following parietal ridge. This is superficial, unattended with depression, and apparently produced by heat.

Breathing stertorous; expiration prolonged without puffing of either cheek. No distortion of mouth; no smell of liquor or laudanum on the breath; tongue unbitten; jaw so firmly closed as only to be opened by the exertion of much force. Pupils firmly contracted, yet slightly sensible to light. If anything, right pupil a trifle more dilated than the other. No bleeding from either ear or nose.

Excessive rigidity of all the limbs, with continuous tremor, ceasing in the superior extremities within two hours, but persisting in the inferior, till dissolution. Either inferior extremity could be lifted from the thigh without flexing the knee. Fore-arms somewhat flexed, fingers partly closed.

Auscultation impossible from excessive mucous râles in throat,

and loud breathing. Slight dullness on percussion over right chest anteriorly.

It was ascertained that he was a carriage painter by trade; that he went in the morning, at an early hour to his place of business, where he worked alone. He made a fire, and was found at about ten o'clock senseless on the floor by the stove, on the side of which some hair was detected. No blood on the floor, or on any part of his head or person. So far as could be determined there had been no previous apoplectic attack.

Some urine was drawn from the bladder, which contained no albumen. Dr. Lidell introduced the stomach pump at my request, and that organ was found to be empty. It was subsequently ascertained that the patient had vomited before admission. No evidences of depression to be detected at the site of injury to the head.

Treatment.—On admission, stimulants and rubefacients were used, and when (at four o'clock P.M.,) the pulse had reached 96, and the skin had grown comfortably warm, the nape of the neck was freely cupped, and a large blister applied over that region, while twelve grains of calomel in butter were put on the back of the tongue, and ice applied to the head. Eight o'clock P.M.—Pulse 96; respiration 32. Half-past nine o'clock.—Died without having uttered a word, or shown a sign of consciousness since his admission—stertorous breathing and tremor of lower extremities having continued till death.

Autopsy, thirty-eight hours after death.—Weather cold; rigor mortis well marked; no evidences of fracture or depression on either side or at base of skull; no effusion between bone and dura mater, or beneath dura mater; meningeal vessels full. At certain sites beneath the arachnoid, and noticeably in fissure of Sylvius, some whitish deposit, reserved for microscopic examination. Endeavoring to dissect the arachnoid from the basilar artery and circle of Willis, observation of parts was impeded by the flow of blood, which leaked apparently through the brain tissues, and made it necessary to resume the examination from above.

A bulging was then observed near the situation of the right parietal protuberance, which was soft to the touch, and fluctuating; extent of fluctuation irregular. No other softened point was found on the convex surface of hemispheres, but the tissues there, as in the fissures of Sylvius, would tear readily when the small vessels of the pia mater were drawn out; longitudinal fissures presented no more congestion than elsewhere; upper part of corpus callosum healthy. On slicing the right hemisphere, so as to enter the lateral ventricle without disturbing the prominence above mentioned; its tissue appeared

healthy. Right ventricle filled with clotted blood, communicating apparently by rupture with the fluctuating tumor observed externally. This clot measured four inches in its long diameter; and two inches and a quarter from the inner wall of ventricle to the outer edge of cavity. This sheet of clotted blood weighed after removal, two ounces and three drachms. Fornix and corpus striatum beneath the clot were infiltrated with blood and pultaceous; and cerebral substance above newly formed cavity decidedly soft to the touch. Right optic thalamus contained a clot the size of a large pea. Choroid plexus natural. Section of left hemisphere above ventricle presented healthy tissue. Ventricle contained a good ounce of bloody serum, and a clot as large as an almond in the anterior horn. Portion of superficies of fornix and corpus striatum of that side honey-combed. Vessels of velum interpositum large, but with no evidences of laceration. Indeed, no other lesions could be observed. Lungs and heart apparently healthy. Very firm, old adhesions of right costal and pulmonary pleuræ; liver somewhat enlarged, fatty in appearance, and firmly attached to colon by old adhesions; kidneys apparently fatty.

Microscopical examination.—Liver and kidneys shown to have undergone fatty degeneration. Vessels removed from the brain, principally from the fissures of Sylvius, shown to be fatty; oil globules to be seen in their structure, and could readily be pressed out on the slide; other portions of brain reserved for this examination lost.

ART. VII.—*Report of the Proceedings of the Medical Societies of New York.*

NEW YORK ACADEMY OF MEDICINE.

REGULAR MEETING, SEPT. 2, 1857, DR. MOTT, *President.*

Reported by Dr. GEO. F. SHRADY.

LESIONS OF THE EPIGLOTTIC CARTILAGE.

Prof. HORACE GREEN read an elaborately written paper upon the Lesions of the Epiglottis. The subject was treated under the following heads:—1. Erosions or abrasions of its mucous membrane. 2. Ulcerations of the membrane and its gland. 3. Œdema or infiltration of its areolar tissue. The following are the conclusions of the author:—

1. The epiglottic cartilage is subject to serious alterations of structure, which, it is believed, have not received that attention in practical medicine which their importance demands. These lesions, which are ordinarily the result of inflammation, are *erosions* of the mucous membrane of the epiglottis. *Ulcerations* of the membrane and of its glands; and *œdema* or *infiltration* of its areolar tissue.

2. Both erosions and ulcerations, although occasionally found associated with tuberculosis, yet are often found to exist as primary disease, being the antecedents, and in many instances, the exciting cause of other grave affections.

3. Erosions occur much more frequently than ulcerations; they differ from the latter in being much more superficial, as they are confined to the mucous membrane, and ordinarily to its epithelial layer.

4. Primary ulcerations of the epiglottis, are alterations of structure, differing essentially, as we have seen, from the erosions of this organ. They originate apparently in the follicles of the mucous membrane, which soften, ulcerate, and, penetrating the fibro-cartilage, destroy, ultimately, a portion of the epiglottis, and if not arrested, prove the cause of still more serious disease.

5. Œdema of the epiglottis, or infiltration of its areolar tissue, is a lesion of this cartilage of somewhat frequent occurrence—the result, ordinarily, of catarrhal inflammation. It is attended, generally, with loss of voice, difficulty of deglutition, and is occasionally complicated with ulcerations of this cartilage, by which, in some instances the epiglottis has been completely destroyed.

6. The epiglottis, which is almost insensible in its normal state, becomes, when diseased, frequently the source of great irritation to the more sensitive adjacent parts. The presence of this cartilage is not indispensably necessary to ensure deglutition, as deglutition may be performed in the absence of this organ. It is necessary, however, to render perfect this act; but its most important function is to cower over and protect that exquisitely sensitive portion of mucous membrane which occupies the supra-glottic space, and which is the true sentinel at the glottic opening.

But the most important practical conclusion is found in these propositions, that some of the lesions which have now been described are often, it is believed, not only among the earliest manifestations of thoracic diseases, but are themselves in many instances, the *true exciting cause* of these affections; and furthermore, this postulate once established, that we have it in our power, by timely, topical medication, to arrest, positively, cases of disease which otherwise would, and in many instances do, terminate fatally.

October 7, 1857.

Upon the conclusion of the usual routine of business, the President stated that the discussion on puerperal fever was in order.

PUERPERAL FEVER.

(*Continued from page* 107.)

Prof. BARKER said:—I should feel, Mr. President, somewhat embarrassed in offering a few remarks on puerperal fever, as the subject has been discussed for three evenings by gentlemen whose character and experience carry with their opinions the greatest

weight, were it not for the difficulty and importance of the subject; the opposite opinions that have been held in regard to it, by distinguished persons; its liability to occur in the practice of every physician; and its terrible fatality. It is not a disease that can be investigated by the study of a few sporadic cases, or a single epidemic, or of different epidemics in the same locality. Neither can it be studied in the dead-house, for, valuable as are the researches which have been made into the minute anatomy of this affection, important as it is for the complete elucidation of the subject, that everything should be known as to the autopsic lesions which are to be found, yet, their variety in different epidemics, the absence of anything like constancy and uniformity in these anatomical lesions, and the frequent want of anything like correspondence between the intensity of symptoms during life and amount of morbid appearances after death, prove that these lesions are to be regarded merely as results of the disease, and not as the disease itself. We might as well seek to find out the causes of fire by a minute examination of the ashes of the conflagration, as rely upon the appearances found after death to determine the character of a disease which results from the absorption of a morbid poison. But is this such a disease? That is the grand question; and it can be answered correctly, not by studying it from one point alone, but by a comprehensive examination of all the phenomena of the disease, as recorded by different observers in different localities, and epidemics. Naturally enough, the opinions, especially the scientific opinions of men have for their basis what they have seen and observed for themselves, and such opinions carry justly with them the greatest weight. Hence, in puerperal fever we have had the brightest minds and the most brilliant geniuses in medicine as exponents of exclusive, restricted, and special views as to its pathology and therapeutics, their opinions being founded on the peculiar types of the disease which they have seen for themselves.

The character of the disease, bringing death into a family that has just been exulting in a new birth, the physician oftentimes being the medium of infection, and its terribly fatal results have brought out the highest talent, where talent has before laid dormant in the ordinary routine of practice, and has thus contributed to give us a richer literature than is found in any other single disease. This will surprise some who have not given it special attention, but it will bear scrutiny. In our anxiety to bring medicine to the perfection of a physicial science, it is possible that, in our search for what is new and original, we may overlook what is old, and thus that erroneous deductions may be drawn from the limited experience and observation of the few, which might have been corrected had advantage been taken of the enlarged experience of the many. We have greatly the advantage of our predecessors in the study of this disease. Notwithstanding the acumen and careful observation of a Gordan, Armstrong, Gooch, and Fergu-

son, they had but a limited knowledge of its pathology and therapeutics, compared with what we may have, who can bring together the aggregate results of all their labors without presuming to place ourselves upon the same intellectual level with them.

What then is puerperal fever? Is it a local phlegmasia? It was believed to be inflammation of the uterus by Mauriceau, Astruc, and Denman; inflammation of omentum, by Hulme, Leake, and others; it was believed to be inflammation of peritoneum, by Hey, Gordon, Armstrong, Collins, and others; Prof. Meigs, more comprehensive in his pathology than those I have named, believes puerperal fever to be a metritis, peritonitis, or metro-phlebitis, or one or more of these phlegmasiæ combined.

In the discussion before the Academy, we have two opposite opinions expressed. In the very able and complete paper of Dr. Smith, upon the *Causes and Modes of Propagation of Puerperal Fever*, he distinctly avows his belief that it is an idiopathic fever; and in Dr. Clark's valuable contributions to the morbid anatomy, although he does not express a definite opinion as to its pathology, yet I think the legitimate deduction that can be drawn from his remarks, is, that it is a local phlegmasia. He says it has four principal lesions:—1. Inflammation of peritoneum. 2. Inflammation of the veins of the body of uterus. 3. Inflammation of lymphatics only. 4. Inflammation of inner surface of uterus. He also expressed his belief that one of these lesions would be found in every case. He expressly avows that these lesions are inflammatory in their character; and that those cases reported by Simpson, as puerperal fever, without lesion, were cases of pyæmia, which had their source in the inflammation of the veins on the inner surface of the uterus. Without stopping to discuss the question at this moment, whether pus absorbed, or to use Dr. Clark's expression, "washed into the circulating fluid" will produce pyæmia or not, it is sufficient for our present purpose to observe that inflammation is claimed to be the essential characteristic, and "that the primary lesions are in the organs of generation, and the secondary are in the blood, and are found, indeed, in all parts of the body." It seems to me that this is equivalent to a distinct avowal of the doctrine of local phlegmasia. The whole question seems to bear upon that point. If it be a local phlegmasia, modified by the puerperal state, we must give up the doctrine of contagion.

In as brief terms as may be consistent with clearness, I will assign my reasons for believing that puerperal fever is a zymotic disease, having an essentiality altogether distinct from inflammation of any tissue or structure of the body even in a puerperal woman. Here I wish to remark that the puerperal state, *per se*, can not alter in any sense the laws which govern inflammation. It may, and undoubtedly does increase under certain circumstances the susceptibility to inflammatory action; but it may and often does produce a condition of the system directly antagonistic to inflammation, such a condition as must notably de-

crease the tendency to inflammation; and it is precisely in this latter condition that we find the most virulent, the most intractable forms of puerperal fever.

What do we mean by the puerperal state? It can only mean the physiological and pathological organic changes induced by gestation, the organic changes produced by parturition, and the physiological changes which follow it. Now, there is nothing in these changes which can essentially change the laws of inflammation alone, occurring under these conditions. I think that I shall subsequently show, that it does not materially differ from inflammation occurring in the non-puerperal state. Now, in giving my reasons for believing that puerperal fever has an essentiality, that it is something entirely distinct from local phlegmasia, it will be seen that I adopt a line of argument parallel with that followed by Dr. Stokes in his masterly lectures on typhus fever.

First, then, puerperal fever has no anatomical character. That there is a great variety of structural lesions found all will admit. The four principal lesions are, as Dr. Clark has said, those of the peritoneum, of the veins, of the body of the uterus, and of the lymphatics of the inner surface of the uterus. And then we have lesions of the pleura, of the lungs; and pus in the liver, in the muscles, in the joints, and pus in the blood. But where we have a group of symptoms so resembling each other that they are almost identical, we do not have constant or uniform structural lesions. They are inconstant in their seat and their amount. In the same epidemic we have the greatest possible variety in their seat and their amount. Lesion of the peritoneum may be present or absent, so of the uterus, so of the lymphatics, and so of the veins. In those cases which Osiander, Gooch, Locock, and Simpson suppose to be cases of puerperal fever without lesion, conceding the correctness of Prof. Clark's view, that, with a proper examination, pus might have been found in the veins of the uterus, that they really were cases of pyæmia, what does this prove? In legal parlance, I should put in a demurrer. Admit the fact, will any one claim that all cases of puerperal fever are cases of pyæmia? That inflammation of the inner surface of the uterus, or of its veins, is an essential anatomical characteristic of puerperal fever?

Second.—These lesions are often not sufficient to influence the progress of the disease, or to explain the cause of death. The most malignant form of the disease, that in which a fatal result occurs the most speedily, offers the fewest and the least striking structural lesions. The longer the disease continues, the more prominent and the more manifest are the organic lesions. Does not this prove that the lesions are consecutive or secondary? That there is a primitive source, an original cause of vital depression, which sometimes destroys life so rapidly that there is no time for the development of these secondary morbid alterations?

The symptoms are not then the result of these lesions, but the result of some specific agent, some morbid poison which subse-

quently developes the autopsic lesions. Sometimes this morbid poison so overwhelms the system, that the patient dies in a few hours, without any reactional symptom. It is not in these cases that we have the most marked structural lesions.

Third.—We may have inflammation even to an intense degree, of any of the organs in a puerperal woman in which the principal lesions of puerperal fever are found, and yet the disease will lack some of the essential characteristics of puerperal fever.

I mean to say, we may have peritonitis, or phlebitis, or metritis in the lying-in woman, and yet the disease will be quite distinct in its mode of attack, in its symptoms, in its morbid anatomy, and in its treatment, from puerperal fever. Take peritonitis for example: it may be excited by a difficult and protracted labor, by the application of cold to prevent hæmorrhage, by improper exposure, and by other well-known exciting causes. But puerperal fever, with the peritoneal lesion, may attack the patient after most favorable delivery, and without any obvious cause. Then the symptoms of the disease show that it has a special character; for in the puerperal fever with the peritoneal lesion, the symptoms of the first stage of peritonitis are absent. The peritoneal symptoms are those of the second stage, or that of collapse; as, for example, we have diarrhœa very frequently instead of obstinate constipation. The pain in peritonitis commences in the region of the uterus. In puerperal fever, the pain often commences at the epigastrium. In peritonitis, the pulse corresponds in character with the local symptoms, increasing in frequency as the local symptoms increase, diminishing as they disappear. In puerperal fever, the pulse bears no relation, or at least a very slight one, to the local symptoms. So also we may have phlebitis in the puerperal woman, and not have puerperal fever. No one, at the present day, would use the terms phlegmasia alba dolens and puerperal fever as synonymous. Yet this is a phlebitis.

But I go further. We may have uterine phlebitis, and not have puerperal fever. The same contrast could be drawn between the two as regards mode of attack, symptoms, and treatment. The difference being that the one disease follows the laws of ordinary inflammation, and that in the other the toxæmic origin of the disease gives it quite a different character. These differences were strikingly illustrated in the recent epidemic at Bellevue Hospital. In the beginning of the epidemic I had charge of the lying-in wards. I must ask permission to read a short extract from the April No. of the American *Medical Monthly*, giving some clinical remarks of my own made at Bellevue Hospital on the 7th of February last:—

"In the latter part of January, succeeding a period of almost unparalleled cold, came that long spell of warm, damp, close, foggy weather. This change had scarcely set in, when, one after another, as the women were delivered—these wards having been previously perfectly healthy—they began to develope, one pelvic cellulitis, another peritonitis, another ovaritis, another metritis, all of the

asthenic type, and with an early tendency to gangrene or suppuration; while scarce one escaped without a threatening, at least, of those terrible torments of nursing women, sore nipples or mammary abscess. Indeed, so well-established did this state of things become, that a pulse of 120 and a flushed cheek were looked for as matters of course on the morning after confinement, and the pleasant soft pulse and cool skin of the physiological recovery were luxuries which the attendant physicians dwelt long and lovingly upon, when, at long intervals, they presented themselves. These cases, notwithstanding that they bore the outward semblance of inflammations, were yet, in their mode of progression, constitutional effects, and indications for treatment so different from the ordinary phlegmasiæ, as to lead Dr. Barker to announce his belief in the specific character of these diseases;—that the quasi-inflammatory processes taken on by these organs were, in reality, the results of the action of a poison infused into them through the blood, and stirring up its peculiar excitement wherever it found the proper amount of combined irritation and exhaustion to insure it a nidus; just as the typhoid poison awakens its deceptive pseudo-inflammations in the brain, the lungs, the intestines. 'Treat these cases,' said he, 'as idiopathic inflammations, and you must inevitably kill your patients.' Most of these cases were treated successfully, by early local derivation or depletion, followed, or even accompanied, by profuse general stimulation. Three, however, terminated fatally; two by suppuration into the pelvic cavity and purulent absorption, in one of which a large number of abscesses, from the size of a walnut down, were found in the lungs; and one by gangrene of the cervix, extending to the mucous membrane of the body, and involving to a slight extent the posterior walls."

The next point to which I wish to call attention, is that the lesions themselves differ materially from those having an inflammatory origin. Prof. Murphy has so clearly pointed out these distinctions that no apology is necessary for quoting them.

"*In peritonitis*, all the arterial capillaries are highly injected: hence the intestines are streaked with bright red lines of capillaries that encircle them. *In puerperal fever*, the venous capillaries predominate; hence the livid hue of the intestines, and the dusky red color of the patches and streaks on their surface. *In peritonitis*, the lymph which is poured out is adhesive, uniting the different parts like glue: if removed from the surface of the intestine on which it is deposited, the strings of this lymph are broken across, and the surface is rough; the quantity of serum poured out is not great, and, being lodged in the cavity of the pelvis, may at first escape observation. *In puerperal fever*, that which we call lymph is not adhesive: it is much more abundant than adhesive lymph, covering the fundus of the uterus, the intestines, the liver, the diaphragm; it is found also in the pleura; its color varies from a dusky brown to a pale yellow; it may be peeled off the

liver, the intestines, or the uterus, quite easily; the surface from which it is taken is smooth, and that of the intestines is a dark red color. The quantity of serum is equally profuse; and this substance being dissolved in it, gives it a lactescent appearance like pus; hence, it is called sero-purulent fluid. Thus, when the abdomen is opened, a large quantity of this fluid always escapes. It will be objected that this sero-purulent fluid is also met with *in peritonitis.* This is perfectly true; but it is necessary to note the stage of the inflammation in which it is observed. I have never met with it unless in the second stage of the attack. When a patient died in the first stage, there was none of it. I conclude, therefore, that in the former instance (the second stage) such effusions only occurred when the constitution was sinking under the attack; but in the latter, when death took place from a different cause, the effusions noticed were the true products of inflammation. *In puerperal fever,* the greater the intensity of the seizure the less the chance of meeting anything like lymph. In the most intense forms no effusion at all may take place. In a degree less intense, a large quantity of serum, colored brown by blood, is found in the peritoneum and throughout the tissues: the lymph poured out is of the same color, having no adhesion to the surface on which it lies, as if the fibrine of disorganized blood had been deposited there. In the next degree, the same kind of lymph or fibrine is found, of a yellow color, with a quantity of sero-purulent fluid. And lastly, in those cases in which the constitution for a time struggles successfully against the fever, some adhesive lymph will be met with, mixed up with a larger quantity of what I have just described."

The next argument which I adduce in proof of the doctrine that puerperal fever is a zymotic disease, and not a local phlegmasia, is that, simple inflammatory diseases are not communicable from one patient to another through the medium of a third party. It may be objected that this argument assumes that puerperal fever is thus communicable, which is not proven, and is one of the points now under discussion. With all due deference to those present who may differ from me, if any such there be, I must be allowed to say, that I think no one fact in medicine is better established than this. The question of contagion is not one of abstract reasoning, but one of facts; and, as to the facts, a few, amounting to positive demonstration, must be conclusive. Negative testimony is utterly worthless in settling such a question. I should almost feel that I insulted the intelligence of those present by entering into an argument on this point at the present day. Prof. Oliver Wendell Holmes, in his essay on the *Contagiousness of Puerperal Fever,* has brought an array of facts which must, I think, be convincing to every unprejudiced mind. For myself, I would say with Dr. Blundell that, "I had rather those I esteemed the most should be delivered unaided in a stable, by the manger-side, than that they should receive the best help, in the fairest apart-

ment, but exposed to the vapors of this pitiless disease." I would heartily concur with the emphatic declaration of Dr. Holmes that, "if, on this point, there is any voluntary blindness, any interested oversight, any culpable negligence, even in such a matter, and the facts shall reach the public ear, the pestilence carrier of the lying-in chamber must look to God for pardon, for man will never forgive him." Now, then, if this disease is thus communicable, is there any other local phlegmasia which is thus communicable? It may be objected that dysentery is sometimes contagious. I think I have myself been through an epidemic of dysentery which was evidently contagious; but I should answer, first, that it remains to be proved that this form of dysentery is simply a local phlegmasia; and, second, that there is no evidence that a healthy person can communicate this disease from one person to another.

My next argument is, that the prophylaxis of puerperal fever is not the prophylaxis of local inflammation. In the large hospital of Vienna, from 1840 to 1846, one in every ten mothers delivered perished, chiefly from puerperal fever. In May, 1847, Dr. Semelweiss prevented students from touching parts at the autopsies, and directed all of them to wash their hands in a solution of chlorine before and after every vaginal examination; and the mortality from this time so far diminished that, in 1848, not above one in seventy-four mothers died. Does not this fact prove the toxæmic origin of the disease in these cases; and that the local lesions are secondary, reactive, and have less pathological value than the change which precedes it? It may be objected, that the views which have been advanced as to the pathology of puerperal fever entirely ignore the existence of an epidemic influence; and that, the epidemic influence may give a specific character to the local phlegmasia. From Sydenham we have learned the phrase "type of the season," and another phrase has come into use, meaning nearly the same thing, viz.: "epidemic constitution." Now, what is meant by these terms? Clearly they must refer to certain atmospheric or telluric influences, which modify the susceptibility of the system to disease, or which increase the virulence of the poison which develops disease. That this influence really exists, acting in both ways, I think there can be no doubt. It sometimes produces its influence wholly on the system, diminishing the vital resistance to disease, and rendering inflammatory action asthenic in its type; or the opposite result may be produced. So, also, it may increase the virulence of the poison which gives rise to the zymotic diseases. Puerperal fever is most notably susceptible to an epidemic influence.

I have thus given my reasons for believing that puerperal fever is an essentiality, that it is a zymotic disease, resulting from the absorption of a specific poison, and that its anatomical lesions are secondary.

The etiology of this disease has been so fully and so ably brought before the Academy by Prof. Smith, that I should not expect to be

listened to with patience if I attempted to add anything to what he has said. So, also, with regard to its semiology—it would be presumptuous in me to attempt to add anything to what is already known to the profession. The question of contagion is one on which the profession is divided. My own views on this point have already been sufficiently clearly expressed. I certainly would not, at this day, seek to change the views of any one who had formed a different opinion; for I should deem it a hopeless task. As I do not intend again to occupy the time of the Academy during this discussion, I will beg your indulgence while I make a few remarks with regard to the treatment. This is the grand aim to which our discussion should tend; and its practical value rests on the bearing which it has on the therapeutics of the disease. The statistics of the disease show that, when it prevails in an epidemic form, about one in three die. It is to be hoped that, in the progress of medicine, the resources of art will prove successful in greatly diminishing this frightful mortality. In some cases, the morbid poison is so intense as to overwhelm at once the vital powers. Just as in some cases of malignant scarlet fever, there is no capacity for reaction, and the patient dies in a few hours after the attack. In such cases as these, art must stand back appalled.

The treatment of puerperal fever has afforded quite as fruitful ground for controversy as its pathology. I do not propose to review the various plans which have, in different epidemics, been supposed, by violent partisans, to be the most successful. I shall only refer to those general principles which should, in my estimation, govern the treatment; and give a few illustrations of some special methods of treatment.

There is no specific therapeutics for puerperal fever. The sooner this idea is dismissed from the mind, the more probable is it that the treatment adopted will have a rational and philosophical basis. No one method is adapted to all types of the disease. It must vary according to the virulence of the epidemic or special poison; according to the condition of the system as to its vital powers when the poison is received; and according to the intensity and severity of its secondary lesions.

I should say, in general terms, that the indications are :—1. *To eliminate from the system as much as is possible the morbid poison.* This is accomplished by means of depletion and the other evacuants—as purgatives, emetics, diuretics, etc.

Unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled, except to a limited degree. In the opinion of some, venesection is the grand remedial agent for puerperal fever; although at the present day, the advocates of this measure, as essential to its successful treatment, are few in number. It proved to be the most efficient remedy in the epidemics met with by Gordon, Hey, Armstrong, and in one seen by Gooch. But in other epidemics, we have the testimony of equally sagacious observers, that it could not be borne. It proved

an agent of destruction. Prof. Murphy has well made the point, that it may prove useful where it can be tolerated as a means of evacuating a certain amount of the materies morbi ; thus relieving the central organs, in which the poisoned blood has accumulated.

It has not been my lot to see those epidemics which would tolerate blood letting ; yet, I believe there are some. In sporadic cases it is doubtless much more frequently indicated. It seems to me that the principal which should govern our practice in this disease should be the same as would govern our practice in any other disease. Venesection should never be resorted to simply, because the case is one of puerperal fever ; but because the symptoms indicate that depletion is necessary. Admitting the pathological view, that "the fever is a natural effect of intense constitutional irritation from local inflammation ;" it does not follow, that blood letting will be the remedy, or even that it will be tolerated. Rejecting this pathological view, it does not follow that venesection is not sometimes of great importance in the treatment of this affection. I hold that it is as equally absurd to insist upon this as the cardinal remedy, as to denounce it as never applicable in the management of this disease. Common sense, not theory, must be our guide in regard to the use of this measure.

The same general principles should govern us in resorting to purgatives, emetics, diuretics, etc. Each of this class of agents have had warm advocates, and have undoubtedly been specially indicated and proved eminently successful in certain epidemics. They are neither to be excluded wholly, or relied upon entirely in the treatment. They may be indicated in certain cases, but they are only to be resorted to when there are special indications for their use. We are to remember, that it is not generally our rôle to put out the fire, but to treat the burn, and hence the importance of the *second* indication, viz. :

To control the vital disturbances resulting from reaction.—These are principally vascular excitement, and nervous irritation. It is unnecessary for me to enter into an elaborate argument to prove the importance of these indications ; for it is obvious that, by vascular excitement and nervous irritation, the vital powers are exhausted, and death follows. It has been before remarked, that it is the pulse which indicates the condition of the patient, much more than the local symptoms. Of the agents for reducing vascular action, we have first venesection, when it can be borne, which is rarely the case. This means of reducing vascular excitement involves a loss of vital power. But we have in the materia medica an agent, lately brought prominently before the profession, which acts specifically as an arterial sedative, without depressing the vital powers. I refer to the *veratrum viride.* We are indebted to Dr. Tully, of New Haven for our first knowledge of its medicinal properties ; and the profession, in certain parts of Connecticut, were familiar with its use long before Dr. Norwood's name was associated with it. It is simply and solely an arterial sedative.

By it, the pulse can be brought under voluntary control. For more than twelve years I have been accustomed to use it for this purpose, and for several years I have used it in puerperal fever; and in no disease have I seen its value more strikingly exhibited. It is an agent which requires care in its use, and in those cases, where its full efforts are required, I never allow them to be left without careful medical watching. The patient must be seen at short intervals. I have never seen any unfortunate results from its use; but I have seen it give rise to very severe temporary depression.*

A case occurred in the hospital at the time of an epidemic, presenting a combination of symptoms, which all familiar with the disease would pronounce truly alarming. By the verat. virid., the pulse was brought down from one hundred and forty to sixty per minute; and it was never permitted to rise above eighty. The quantity administered varied according to the condition of the patient, two, three, or four drops being found sufficient to control the vascular excitement. In many other puerperal cases I have seen equally striking results. I will briefly mention one which I saw in consultation with Dr. Sayre, the tenth day after confinement. She was a primipara, and her convalescence seemed perfectly normal until the sixth day, when she began to exhibit some appearance of mental disturbance. She was especially anxious in regard to her religious condition. Gradually a high state of nervous excitement was developed with insomnia, and when seen by myself, she had been decidedly maniacal for more than twenty-four hours. Her respiration was short and hurried, her pulse very rapid, her countenance anxious and frightened; she was incessantly talking, and starting with apprehension from the slightest movement in the room. No physical exploration could be obtained, but there were no local symptoms indicating pelvic trouble. She sat up in bed and moved from one part to another with great rapidity. The verat. virid. was now given, and by its influence the pulse was brought down below seventy per minute, the respiration became slower, the mind tranquil, and she was enabled to sleep. I am informed by Dr. Sayre that, in the course of a few days, there was developed in the pelvic cavity an extensive abscess, which pointed externally, near the sacrum. Her convalescence was somewhat prolonged, but she eventually recovered.

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* There is a marked difference in the power of the article grown at the South, compared with that grown at the North, which should not be forgotten in prescribing it. When I removed to this city in 1850, the tinc. veratrum viride was not kept by the druggists here; and I therefore procured some from Norwich, Conn. I was accustomed to prescribe this (a saturated tincture made from the article growing in Connecticut), in doses of from twelve to twenty drops. In the first case in which I made use of the tincture, now found in the shops here, alarming prostration was produced, and I soon learned that I must diminish very decidedly the dose. Prof. Dickson of Charleston, S. C., informed me that seven drops is a large dose of the tincture used at the South.

One of the most important indications we are called upon to fulfill in the management of this disease, is to allay nervous irritation. There is no doubt that the most frequent of all the lesions of puerperal fever are those of the peritoneum; and that the disturbance to the nervous system is much more severe than from any other local cause. It is well known to most of the profession that, within the last four or five years, this has been treated by heroic doses of opium, or of some of its preparations. It has long been used by the profession in the treatment of peritonitis; and Graves and Stokes have demonstrated its great value in idiopathic, or traumatic peritonitis; but to Prof. Clark belongs the honor of fully testing it in what he calls "puerperal fever with peritoneal lesion." This is his own ground, and I will not encroach upon it, inasmuch as we hope to hear in detail the result of his large experience. I have treated a few, a very few cases compared with him. It is astonishing to see to what extent patients will tolerate opium where the peritoneal lesion predominates; but it is only in this form of fever that this great tolerance exists. The quantity given in some cases without producing narcotism is enormous. But there is one point to which I wish to call attention, and that is a test whether the action of this drug is proving beneficial or not. If opium be pushed to incipient narcotism, or a point little short of it, a gradual decrease in the frequency of the respiration results. In some of my cases, the respiration went down to 14, 12, and 10 per minute.

Now, the opium treatment is acting beneficially, when, in connection with the reduction of the frequency of the respiration, there is a corresponding decrease in the frequency of the pulse; but if the opium is pushed to the point of incipient narcotism, the respiration growing slower and slower, without a corresponding decrease in the pulse, I should say the opium treatment is to be abandoned at once. In one case that occurred at Bellevue Hospital some two years since, the opium had been pushed to such an extent that galvanism had been resorted to, to make her breathe. When I saw her, the respirations were 10 and 11 per minute, while the pulse was above 140 per minute. Seeing this slow respiration with the frequent pulse, I suggested that no more opium should be administered, as I thought its continued use would overwhelm the vital powers. The veratrum viride was then given, and in a few hours the pulse came down below 80. This patient eventually recovered. I will state, then, as my conviction, that in that class of cases where the peritoneal lesion predominates, the opium treatment has proved successful to an extent which no other has.

In many cases, to control the vital disturbances resulting from reaction, it will be necessary to use a variety of agents to accomplish this end. Venesection, veratrum viride, opium in full doses, camphor, all may be indicated, and prove eminently serviceable in the same cases. In illustration of this, I will mention a case

which occurred in my private practice. The patient, a primipara, was delivered by the forceps, after a very severe labor, on the 4th of July last.

On Sunday the 5th, everything seemed to be going on in the most favorable manner. I saw her again on Monday morning; and there was no indication of disturbance of the general system, except that she complained somewhat of nausea, her breath smelled like raw beef, and the tongue was covered with a pasty white coat. I was sent for to see her again that day between five and six, P.M. I found that she had been seized a little time before with a violent rigor, her countenance was pale and haggard, wearing an anxious despondent look. She complained of intense pain over the lower part of the abdomen, particularly over the left iliac region. Her pulse was about 132 per minute. Here was a case calculated to excite the gravest apprehension. The following prescription was made; and it will at once be apparent what indications it was designed to fulfill.

℞ Pulv. G. Acaciæ, . ℥ss.
Sol. Morphiæ, (Majend.) gtts. lxxx.
Tinc. Aconite, . gtts. xvj.
Mucil. G. Acaciæ, . ℥ji.

M.S. A table-spoonful every second hour.

Turpentine fomentations were applied to the abdomen.

She was seen by me again late that evening. The pain was decidedly less; but the pulse continued very frequent. She obtained no sleep that night. The mixture was continued the next day at intervals of four hours. On the third day from the attack, fifth after delivery, she was seen by my colleague, Dr. Peaslee, who found that the pain had ceased; skin soft; pulse 92; but there was still this pasty coat upon the tongue. She subsequently had some swelling and pain in the left leg, along the track of the crural vein; but this continued but two days. The mixture was continued in diminished doses, for several days afterward, as the pulse continued frequent after all the local symptoms had disappeared. She had no mammary secretion. Under this treatment alone she perfectly recovered.

I will give a brief outline of another case which was to me most interesting and instructive. This patient was confined about the 1st of August; and int his case, also, the forceps were necessary, on account of the position of the head. It was the right occipito-iliac posterior, the occiput rotating back to the sacrum instead of anteriorly. After the labor was completed, I gave her a full dose of opium, as I usually do after the labor has been severe. For two days after delivery, everything went on favorably; but on the evening of the third day, she had a slight rigor, and was seized with a most intense pain in the lower part of the abdomen and in the vagina; so severe, that, although a person of great self-control, she shrieked out with agony. Her pulse was very rapid. Turpentine fomentations were applied to the lower part of the ab-

domen ; and Majendie's sol. in full doses was given until the pain subsided. The pulse continuing very rapid, I then gave the verat. virid. in twelve drop doses every hour, until the pulse was brought down below 80 ; and there it was my aim to keep it. On the evening of the fifth day after confinement, I was sent for in great haste, when I found her with symptoms of cerebral congestion of the most alarming character. The attack had come on suddenly, without premonition. She complained of asphyxia, her countenance was livid and turgid, and every appearance was such as to indicate the most imminent danger. I should mention that, although not a person of full habit, I had found it necessary to bleed her a few weeks before confinement. I now opened a vein, and abstracted about thirty ounces, which at once relieved her of her cerebral symptoms. Previous to her confinement, the urine had been tested for albumen, but none was found. The blood now drawn was examined by my friend, Prof. Doremus, and found to contain urea. I say, after bleeding, there was entire and complete relief from all the cerebral symptoms ; but still the pulse remained rapid and frequent, and there was still a tendency to pain in the vagina and pelvic cavity, requiring the occasional use of Majendie's solution. The point that I wish to call attention to is, that the second day after venesection the local symptoms disappeared in a great measure ; but if the veratrum viride was not continued, the pulse would become extremely rapid ; and this patient required the constant and steady use of this remedy for thirteen days. It may be said by some that these were not cases of puerperal fever ; and I have anxiously asked myself the question whether they were so, or were cases of local phlegmasia. I answer, that they were cases of puerperal fever ; and I will mention only one reason for believing so, viz., after all the local symptoms had disappeared, there was still left evidence of poison in the system, as shown by the rapid pulse.

Third.—To combat the local secondary lesions, which may be developed. I will not take up the time of the Academy in enlarging on this part of the treatment. Local depletion, counter irritation, fomentations to the abdomen, turpentine endermically, opium to subdue pain, chlorinated injections ; the value of all these measures, where special indications for their use exist, has long been settled by the profession. The discriminating physician will employ each or all of these methods as adjutants to the radical treatment of the case. I will only add one other indication, viz. : *to sustain the vital powers of the system ;* in other words, keep the patient alive. There is a certain class of cases where the system seems to be overwhelmed, and yet life will be preserved by the heroic use of stimulant, and good nutrition. I believe many are permitted to die from the neglect of these resources. It seems to me that after a patient with puerperal fever has lived for forty-eight hours there is constant encouragement for effort, and that the danger is, in a certain sense, diminished in proportion

to the duration of the disease. Without enlarging upon this topic, I will read a brief abstract of another case reported by Dr. Cobb, which occurred in my service in Bellevue Hospital, which I think will illustrate my ideas better than argument. This patient was so entirely prostrated by the disease, and had such a variety of secondary lesions, that she was regarded by myself, and all who saw her as past praying for.

"Matilda Smith, æt. 21 years, first pregnancy, was delivered, in the lying-in wards of Bellevue Hospital, of a healthy child, at full term, at eight o'clock P.M., February 11. For the first few days after delivery she appeared to be doing well. Nothing unusual occurred to call attention to her case until February 17, when she had a severe chill, with a quick rapid pulse and intense pain over the region of the uterus. The vaginal discharge was profuse, very dark colored, and excessively offensive. A large blister was applied over the region of the uterus, and Dover's powder, calomel, and camphor were administered, and she was removed to the fever wards. This treatment was continued for forty-eight hours, but without benefit. On the contrary, her symptoms were constantly growing worse. Her pulse was above one hundred and forty, weak and irritable. Exquisite tenderness over the uterus, the vaginal discharge abundant, very black, and extremely offensive. She vomited frequently a greenish colored fluid, and became somewhat deaf. Dr. Barker now ordered porter, milk punch, beef tea, as much as the stomach could take care of, and a full opiate at night. For ten days her condition varied but little from that above described. The stimulants were pushed to the point of tolerance, but the pulse continued very weak, rapid, and irritable. Her whole aspect was as bad as possible. Quinine was tried, but it could not be borne as it induced severe headache. February 28, she had an attack of capillary bronchitis, accompanied with profuse perspirations and coldness of the surface. This was relieved by extensive dry-cupping over the front and back, and the liberal administration of carb. ammoniæ. A few days after, an abscess made its appearance in the right mamma, which, when opened, gave exit to at least two pints of very offensive pus; she also had a large bed sore. These three complications—capillary bronchitis, mammary abscess, and bed sore, made their appearance about the same time. Diarrhœa set in March 3, which was found very difficult to control. On the 4th it is recorded that she took a moderate quantity of beef tea, two bottles of porter, and thirty ounces of port wine. March 5, she appears somewhat better. Pulse varying from one hundred and twenty-five to one hundred and thirty-five; perspirations still very profuse, and vaginal discharge still very offensive. Tenderness over the uterus not so intense, diarrhœa ceased. From this time she gradually improved; but her convalescence was greatly retarded by the extensive suppurations in the mamma and bed sore. Early in April she was discharged cured."

This case was watched with great interest by the students in attendance from the different colleges, and I need not add that her recovery was as gratifying as unexpected. In the interesting history of the recent epidemic of puerperal fever in the Dublin Lying-in Hospital, by Dr. McClintock, the present able master, it will be observed, that he found it necessary to make a liberal use of stimulants.

Apologizing for the length of my remarks, I will occupy the time of the Academy no longer.

Prof. CLARK stated that he did not rise to continue the discussion. He congratulated the Academy upon hearing such an interesting paper from Dr. Barker. If he was not witty himself, he seemed to have been the occasion of wit. It had proved a good fortune to the Academy that Dr. Barker was not present when this subject had been brought up before. The Academy would agree with him that it was a very connected and substantial argument to prove his point. It did not differ very materially from his own views on the subject, and he would propose that the discussion be continued at the December meeting.

[*To be continued.*]

ART. VIII.—*Report of the Practice of St. Vincent's, Brooklyn City, and Bellevue Hospitals.*

ST. VINCENT'S HOSPITAL.

This Institution, which has now taken rank as one of the permanent hospitals of the city of New York, first went into operation under the management of the Sisters of Charity, in the year 1849. At first it occupied a three-story house in Thirteenth street, between Third avenue and the Bowery, and shortly afterward an adjoining building of similar dimensions was added, the two affording accommodation for about seventy-five patients. Every variety of medical and surgical disease, with the exception of those of recognized contagious nature, was received, and, after more than six years of successful management, the hospital was removed, in April, 1856, to a larger and more commodious building, heretofore occupied as an orphan asylum, in Eleventh street, near the junction of Greenwich and Seventh avenues. To this building a new wing, containing an operating theatre and all the necessary conveniences, was shortly added, and the Institution contains now one hundred and twelve beds, all of which are generally occupied. The aggregate number of patients treated in the hospital, up to the present time, is four thousand one hundred and sixty-seven, making an average of five hundred and ninety-five for each year of its existence.

The physicians and surgeons of St. Vincent's Hospital are as follows:—Consulting Physician, Wm. Power, M.D. Consulting Surgeon, Valentine Mott, M.D. Physicians, Wm. Murray, M.D.;

James O'Rorke, M.D.; Thomas E. Burtsell, M.D. Surgeons, W. H. Van Buren, M.D.; Alex. B. Mott, M.D.; Thomas C. Finnell, M.D. Resident Physician and Surgeon, M. A. Finnell, M.D.

The following cases are selected from the records of the surgical service, kept by the House Surgeon, Dr. M. A. Finnell; they occurred during the months of April, May, June, and part of July, of the present year; Dr. W. H. Van Buren being the surgeon in attendance:

I.—*Chronic synovitis of elbow joint, with sinus leading into articulation—Exsection of the joint—Favorable result.*—Louisa Bauer; æt. 25 years; unmarried; born in Germany; admitted May 1, 1857, under Dr. Van Buren, with disease of right elbow joint of three years standing. The history of the disease was that of chronic idiopathic synovitis, leading to partial anchylosis. Within the present year an attempt was made, by forced motions, to break up the anchylosis, and restore use to the joint. The result of this measure was unsuccessful; an increase of inflammation, resulting in suppuration, followed, and when the patient entered the hospital a probe could be passed into the joint through the olecranon process of the ulna, which was carious, and had, as was afterward ascertained, been fractured—probably in the attempt to remedy the anchylosis by forcible flexion and extension. The patient was otherwise healthy, constitution good, and catamenia regular. On the 16th May it was decided in consultation to exsect the joint. This operation was effected by a single longitudinal incision, about five and a half inches in length, over the posterior aspect of the joint. All of the articular surfaces were found altered beyond repair; and the olecranon process fractured and carious, with no attempt at union. The head of the radius was sawn off, so as not to disturb the orbicular ligament; the ulna on a line with the section of the radius, and about five-eighths of an inch of the lower end of humerus, the angles left by the section of the humerus being rounded off by the bone forceps. The wound was partially closed, and the limb placed on its inner side and slightly bent, in a tin splint. On the eighth day, very little inflammation having followed, and the discharge being healthy, it was bent to little less than a right angle, and placed in a new tin splint adapted to the posterior aspect of the arm and fore-arm, the fore-arm being retained in the attitude of supination—the splint being so constructed as to expose and allow the daily dressing of the wound at the elbow. By the third week the patient was able to leave her bed, supporting the limb in a sling, all constitutional excitement having subsided. The wound progressed favorably on the whole, several abscesses having formed and discharged without materially impeding its consolidation, and on the first of August it was entirely healed, and she left the hospital. At this time she could flex and extend the elbow, and pronate and supinate the hand without pain, and with considerable power, which was steadily increasing, the prospect of future usefulness of the new

joint being fair. The power of extension of the fore-arm was preserved through the lateral attachments of the tendon of the triceps extensor muscle to the aponeurosis of the fore-arm, which, as the usual transverse incisions were avoided, were left undivided. The patient has since visited the hospital, with increasing use of her arm, and in excellent general health.

II.—*Carcinoma of the breast—Removal of the mammary gland, and numerous axillary lymphatic glands—Recovery from the operation.*—Ellen Dixon; æt. 32 years; Ireland; married; admitted June 25th; under Dr. Van Buren. The tumor, in this case, was of fifteen months growth, and presented the history and features of hard cancer, with slight enlargement of several glands in the axilla. The patient's general health was excellent, and the disease advancing somewhat rapidly. The patient suffered much mental anxiety, as well as physical pain, from the tumor, and was very anxious for its removal. The operation was recommended in consultation, and performed on the 29th June. A large number of lymphatic glands in the axilla, were found to be suspiciously indurated, and removed—to the number of eighteen in all—principally by enucleation by the fingers, and tearing them away. The wound was closed entirely, moderate and uniform pressure applied, and it healed by the first intention, except at the points where the ligatures were brought out. She was discharged, cured, on the 18th of August. Subsequent microscopic examination demonstrated the cancerous nature of the disease.

This patient was subsequently brought to the hospital with dislocation of the shoulder, and was found to have suffered no inconvenience whatever from the removal of so large a number of axillary glands.

III.—*Malignant ulceration of os uteri—Amputation of the cervix by the écraseur—Recovery.*—Mrs. Adelaide Preston; æt. 32 years; Ireland; married twelve years; admitted under Dr. Van Buren, June 24th. Patient miscarried five months after her marriage, and has never since missed a menstrual period. Her health has been uniformly good, and she presented the appearance of a healthy, fine-looking woman, at the time of her admission into the hospital. About three months ago a watery discharge from the vagina made its appearance, which had an offensive odor, and a few days afterward quite profuse hæmorrhage came on for twenty-four hours, and ceased spontaneously, the watery discharge continuing as before. The hæmorrhage returned at intervals from this period, alternating with the offensive, thin discharge, until a few days before her admission, when she bled so profusely as to make it necessary for her physician to apply the tampon, on the removal of which she was advised to enter the hospital, for surgical treatment.

On examination per vaginam, a fungous ulceration was found occupying the presenting portion of the cervix uteri, and surrounding the os, being more developed on its right side. The whole extremity of the cervix was enlarged and expanded to at least

double its normal size, and the finger recognized beyond this that the base of the cervix was apparently healthy to the touch—its expanded and ulcerated extremity overhanging its base somewhat in the shape of a mushroom. The orifice of the os uteri, although surrounded by ulceration, presented a healthy appearance, as though the lining membrane of the cervix was not involved in the disease. The slightest touch of the ulcerated surface provoked free bleeding. The odor of the discharge was distinctly that of cancer of the uterus. A portion of the fungous ulcer was pinched off and subjected to microscopic examination, by Prof. Van Buren and Dr. Gouley; its substance was found to consist entirely of cells, large in size, and containing two or more large nuclei—the mother cells so often found composing the substance of soft cancer. The patient had never suffered any pain in the back, or elsewhere, except in a slight degree in sexual intercourse, just previous to the first appearance of the offensive watery discharge. The uterus itself was movable, normal in size and weight, and apparently free from disease. The patient's husband is a very respectable and perfectly healthy man.

The apparently isolated character of the disease, together with the youth and good general health of the patient, seeming to justify an effort to relieve her, at least temporarily, of her loathsome complaint, she was advised to submit to an operation; and accordingly, on the 29th June, the cervix uteri was amputated by Chassignac's *écraseur*. By means of long hooks securely fixed into the base of the cervix, the uterus was gradually drawn down until its ulcerated extremity protruded fairly outside of the vulva, the patient being placed on her back, and under the full influence of chloroform. The loop of the écraseur was then applied around the base of the cervix, on the uterine side of the hooks, and gradually tightened. About thirty-five minutes were occupied in completing the section, the hooks being disengaged and one of them reapplied behind and above the loop of the instrument before the section was effected, so as to prevent the body of the uterus from retiring out of sight. One small artery only gave out a jet of blood, and as this was fairly accessible, it was secured by a ligature. The actual cautery, which was in readiness in case of necessity, was then thoroughly applied to the stump, and the hook withdrawn, the uterus replaced, and the vagina moderately filled with shredded lint. The patient was replaced in bed, and toward evening had an anodyne draught. On the next day she had a slight acceleration of pulse, and complained of trifling pain in the back. On the third day this had disappeared, and the tampon was removed from the vagina, which was syringed out with a weak solution of chloride of soda. From this time the patient recovered, without a bad symptom. The vaginal discharge gradually assumed a healthy purulent character, entirely free from morbid odor. This discharge gradually diminished in quantity, and on the 1st of August she was discharged, believing herself to be entirely cured. Subsequent microscopic

examination of the disease which was removed, rendered its malignant character certain; it was recognized as true soft cancer, with none of the characteristics of an epithelial growth. The section effected by the écraseur was satisfactory; it had been made through sound and healthy tissue, and the uterine surface was smooth and even.

IV.—*Malignant tumor of palm of hand—Extirpation—Recovery from operation.*—Margaret McDevitt; æt. 21 years; single; Ireland; admitted May 9, 1857. Patient has lived in Pennsylvania since early childhood, and came to this city for surgical advice. Her health was always good until about nine years ago, when a small lump of a dusky red color made its appearance in the middle of the palm of the left hand, caused, as she thinks by bruising the hand with the handle of a mop. It has never given her pain, has always felt to her soft as if it contained fluid, and has twice been opened, at different times, under this idea; the incisions gave issue, however, to nothing but blood, and to this rather freely. At the time of her admission, the tumor was as large as the big end of a hen's egg, dusky and even bluish in color, soft and fluctuating to the feel, and apparently situated above the palmar fascia. On the introduction of an exploring needle blood escaped freely, and coagulated promptly. No amount of pressure or handling caused pain. It was decided in consultation to remove the tumor, and this was done on May 16, by Prof. Van Buren, the surgeon in attendance. A crucial incision was made, and the flaps raised, bringing into view the surface of the tumor—of a bluish color, with white fibres of the palmar fascia stretched tightly over it, and widely separated from each other. As these were divided by the knife, the tumor was readily lifted from its bed. It lay upon the deep flexor tendons, and the branch of the ulnar nerve supplying the little and ring fingers, which also passed over its surface, was carefully preserved. The tumor when laid open presented the characteristic appearances of encephaloid, or soft cancer. On examination subsequently under the microscope by Dr. Gouley, it was found to consist entirely of cells, many of which were concentric with several large nuclei, and others were true parent cells. The wound healed promptly, and the patient, promising to communicate with the attending surgeon in case the disease should return, was discharged cured on June 5.

V.—*Fibrous tumor of labium majus—Removal—Cure.*—Margaret Madden; æt. 23 years; single; Ireland; admitted April 7, 1857, under Dr. Van Buren, seeking relief for a lump which she had first discovered about a year before in the left labium majus; at this time the tumor was the size of a small hickory nut. When admitted she was found to be healthy in every respect, with the exception of the tumor which had now reached the size of a goose-egg; it was very œdematous, pitting on pressure by the finger, and hung pendulous from the labium by a pedicle about two inches in length, and as thick as the little finger. The pedicle was

divided by an elliptical incision close to the labium, the bleeding vessels carefully secured by ligature, and the wound left to granulate. It healed without delay or accident, and on the 17th of the same month the patient was discharged cured. The tumor, on examination, proved to be purely fibrous in character, and its substance, as well as the subcutaneous cellular tissue by which it was surrounded, was infiltrated with serum.

VI.—*Senile gangrene of the lower extremity—Amputation—Cure.*—Catharine McGinnis ; single ; Ireland ; age uncertain, probably about 60 ; admitted April 3, 1857. Patient had suffered severe pain in the right foot for two years, for which she could get no relief. Three weeks before admission, by the advice of a friend, she had rubbed the painful part with volatile liniment, and this was succeeded by the appearance of mortification of the great toe, and the adjoining one. At the time of her admission, these two toes were dry and black, and the pain of which she complained bitterly, was still the same. There was an imperfect attempt at a line of demarkation between the dead and living parts. No distinctly ossified arteries could be felt anywhere ; the patient's pulse was feeble and not frequent, appetite poor and capricious, general condition below par. Her skin was particularly dry, inactive, and scaly ; her mind weak and childish. She was treated by opium and camphor, with moderately generous diet. At the end of a fortnight, the mortification had slightly advanced, a new and separate eschar had formed over the prominence of the great toe joint, and the pain scarcely at all relieved. At the end of a month, things remaining in about the same condition, and the pain very urgent, hæmorrhage occurred several times from the junction between the dead and living parts. This symptom, and the urgent desire of the patient to have the limb removed, led to a consultation, when it was determined to gratify her, and on May 30, amputation was performed below the knee. Chloroform was given ; the arteries were all found calcified, more decidedly at the place of amputation than they were below, near the seat of the disease, as was found on subsequent dissection of the limb. The operation was well borne, and the stump healed exceedingly well, there being no sign of hæmorrhage. Her pulse did not exceed 106 at any time. This patient is still in hospital. She is less childish, and still complains of her stump, which to all appearance is perfectly healthy.

VII.—*Compound fracture of thigh—Recovery.*—Hugh Cox ; æt. 65 years ; Ireland ; laborer ; admitted April 18, 1857, under Dr. Van Buren, with compound fracture of the femur at the junction of its lower and middle third, which was produced three days previously by the passage of a cart-wheel over the limb. The wound was situated on the inner aspect of the thigh, opposite to the fracture ; it was of small size, and produced by one of the fragments of the fractured femur, which, according to the patient's statement, protruded through the skin at the time of the injury. The fracture

of the femur was oblique, and attended with about one and a half inches shortening, the upper fragment being situated anterior and externally to the lower. The patient was a healthy man, and, as far as could be learned, of regular habits. The wound, at the time of his admission, was free from inflammation, and discharging a straw-colored serous fluid in small quantity. The limb was placed upon a double inclined plane, and the thigh dressed with the many tailed bandage and coaptation splints. Reparation took place slowly in the wound, unattended by any inflammatory symptoms, and at the end of a month it was entirely closed. The limb was then placed in the straight apparatus, and brought down into very good position. At the end of another month, very satisfactory consolidation had taken place, but the apparatus was retained upon it for a fortnight longer; at which time it was removed, and the patient permitted gradually to get about on crutches, union being firm, with not more than half an inch shortening. On July 5, patient was discharged cured.

VIII.—*Chronic synovitis of knee joint—Exsection of the articulation—Favorable progress toward recovery with a useful limb.*—Sarah Flannigan; æt. 28 years; Irish; seamstress; admitted in April, 1857, under Dr. Van Buren, with chronic disease of left knee joint. This case presented the usual history of idiopathic white swelling of the knee, which had been slowly but steadily advancing since its commencement, eight years before admission, in spite of the treatment employed. The knee had become latterly so painful at night, and so much worse in every respect, that she was no longer able to work for her living, and she entered the hospital with the intention of submitting to amputation. The diseased joint was very much enlarged, its motions very limited, progression painful, and followed by starting and severe pain at night. It was hot and painful to the touch, and the whole limb somewhat atrophied. She was free from organic disease elsewhere, and her general condition moderately good, appetite delicate, pulse ranged from 80 to 100 in the minute.

The limb was placed upon a double inclined plane, and local depletion and counter irritation employed with benefit. On resuming the use of the limb again after a reasonable time, however, the pain and heat immediately returned again as badly as before. This was repeated several times with the same result, until the patient became discontented and demanded an operation. There were no abscesses or sinuses about the joint, and the patient's general condition was not so critical as to demand amputation in the opinion of the attending surgeon, and accordingly he proposed to attempt to save the limb by exsection of the joint, inasmuch as a cure by anchylosis seemed out of the question. This proposition was adopted on consultation, and, with the consent of the patient, was carried into effect on May 23. The patient being placed under the influence of chloroform, the diseased joint was laid open by means of a semi-circular incision, its centre crossing

the ligamentum patella, and its extremities occupying depending points on either side of the limb. The joint was found to be partially obliterated by half organized fibrine thrown out in view of anchylosis, and interspersed with cavities containing concrete pus, mingled with tubercular matter. The cartilages had entirely disappeared, and the articular surfaces presented an irregular, craggy, and worm-eaten appearance. The articular surface of the tibia presented two plates of necrosed bone, each about the size of a dime, corresponding in position to the points of contact of the two femoral condyles. These were movable, and imbedded in a soft material apparently ready to break down into pus. The joint, in short, was in a condition in which, so far as could be judged, suppuration was inevitable at no distant period. The lower extremity of the femur was carefully separated from its connections, and sawn across, a portion, one inch and three-eighths in length, and involving all the altered bony surface, being removed. The surface of the remaining portion of the femur was healthy in appearance. The articular surface of the tibia was then removed in the same manner, by a section averaging half an inch in thickness, the tibio-fibular articulation not being opened. The altered surface of the patella was removed by the rat-teeth bone forceps. The sawn surfaces of the tibia and femur were then placed in apposition by bringing the leg into an extended position, and the shape of the limb being found satisfactory, they were wired together by well annealed iron wires, which were passed through holes drilled through the opposing surfaces of the femur and tibia, at points about three inches apart, and the ends of the wires being firmly twisted together, very firm and solid contact and exact apposition were thus secured. The semi-circular flap, which included the patella was then brought into place, and with a very little trimming fitted very fairly, though without tension. The incision which, following its curve, was about nine inches in length, was then closed accurately by sutures, except at each extremity, where it was left open for the space of an inch, and a full sized tent of lint lodged fairly in the cavity of the wound ; the iron wires were brought out between the sutures, cut off, and bent over, so as not to be liable to disturbance in dressing. The hæmorrhage attending the operation was moderate, and the ligatures were brought out at the extremities of the incision. The limb was then placed in a concave tin splint, which had previously been fitted to it, and extending from the tuber ischii to the foot, which latter was bandaged to a foot piece, which formed part of the splint. Opposite the wound on either side, the splint was so constructed as to open and allow of its being dressed without disturbing the position of the limb, and this arrangement was found afterward to answer an excellent purpose.

The operation was well borne by the patient, and the constitutional reaction which succeeded was moderate, and had mainly subsided by the tenth day. The wound healed by the first inten-

tion, except where it was kept open by the wires, and the tents. These latter were withdrawn on the sixth day, and answered the purpose for which they were intended, viz., of keeping free openings at depending points for discharges from the interior of the wound, and thus preventing abscess and inflammation from retained pus, etc. The discharge from these points was moderately free, and they did not close entirely until the end of the third month.

The wires, which caused little or no irritation, were removed by forcible traction after untwisting, at the end of the sixth week. The limb was removed from the splint on August 17, about twelve weeks after the operation; pretty firm union had taken place, but there was still slight motion. A paste-board splint was substituted for it, around the seat of the operation. The only abscess which occurred, formed over the head of the fibula during the fourth week; it was opened early, and slowly healed during the following month. At the end of August, the patient's general condition, although somewhat reduced by the confinement and heat of the weather, was, on the whole, good. She was ordered iron and quinine, and to commence gradually to get about with crutches. In a fortnight she had succeeded in getting down stairs, and bore a little weight upon the lame limb, and her general health was improving. No pain at the seat of the wound, where the limb, to use her own language, "is getting stronger every day." Since this time, she has gradually used it more and more; and, although the points at which the wires were brought out occasionally inflame and reulcerate, yet her prospect of eventually possessing a strong and useful limb is exceedingly promising.

The ultimate result of this case will be reported on a future occasion.

During the period covered by the cases related above, two deaths occurred in the surgical service. The first was a young woman who was admitted with ulcerated soft cancer of the lymphatic glands in front of the left sterno-mastoid muscle; she suffered very little from hæmorrhage, and died exhausted by the cancerous cachexia.

The second fatal case was a man, æt. 40 years; broken down by dissipation, and suffering from long standing disease of the bladder and kidneys, the result of neglected stricture of the urethra. The immediate cause of death in this case was uræmia from suspended action of the kidneys.

BROOKLYN CITY HOSPITAL.

Dr. Joseph C. Hutchison, Attending Surgeon.

(Reported by Robert O. Butler, M.D., of Louisiana, late House Surgeon.)

Case 1.—*Abscess in the Tibia—Trephined—Recovery.*—John F.; æt. 21 years; hostler; native of Ireland; good constitution; sandy

hair; dark blue eyes; temperate in his habits; healthy parentage; no hereditary taint; has never had syphilis.

His medical history is as follows:—In July, 1855, after being a good deal exposed in driving at night, he was attacked with stinging pains, apparently in the bone, just below the left knee joint, which always grew worse toward night. At the end of two months, he was compelled to quit work, and was treated by leeches and iodine locally, and iodide of potassium internally. Not having been materially benefited, he entered the Brooklyn City Hospital, in October, 1855, and was discharged in two weeks, with his limb feeling perfectly well, after the use of iodine as before, with rest. The pain returned about the middle of the succeeding February, and he entered the hospital a second time, March 5, 1856. The integuments over the upper part of the tibia were red, swollen, and exceedingly tender on pressure, and the pain in the part was very severe, especially at night. Under appropriate treatment relief was procured, and he was discharged April 11, believing himself to be perfectly well. At the end of a month, the pains again returned, and he entered the New York Hospital, July 21, 1856, with an abscess forming over the head of the tibia, which was opened the third day after admission. He remained in the house one month, and was discharged apparently well.

Five months subsequently the stinging and throbbing pain in the head of the tibia again returned, and he was admitted a third time into the Brooklyn City Hospital, February 1, 1857. Another abscess had formed in the soft parts over the seat of pain, which was opened, and about two ounces of thick, dark-colored pus discharged with considerable relief. The abscess got well, and the pain again began to increase on the 22nd February. Dr. Enos, who was then on duty, made a free incision on the inner aspect of the head of the tibia down to the bone, which afforded complete relief until March 6, at which time he was found suffering with severe pain described as resembling the pain of toothache, increasing toward night, and situated at the point where the incision, which had not quite healed, was made. The integuments were red and swollen, and there was some febrile disturbance.

On the 8th of March the pain was most severe; the redness of the integuments had extended around to the outer aspect of the head of the tibia; there was very great tenderness on pressure over the part, and considerable fever. The head of the bone, carefully examined, was found somewhat enlarged, chiefly on its inner aspect; the knee joint was healthy. Dr. Hutchison, suspecting the existence of a circumscribed abscess in the head of the tibia, (in which impression Dr. C. E. Isaacs, who was visiting the wards with him, concurred), had the patient etherized and exposed the bone by a crucial incision at the point to which the chief pain was referred, viz.: on the inner aspect of the head, one inch below its articular surface. The flaps were dissected back, a trephine of medium size applied, and, after penetrating the bone an inch, pus,

of a peculiarly white and creamy appearance, oozed up by its side. A circle of eburnated bone was removed with an elevator and chisel, and at the bottom of the hole thus made, a portion of the cavity from which the pus flowed was observed extending upward toward the joint, beyond the circle made by the trephine. About half a drachm of pus was seen, and probably more escaped, mixed with blood so as not to be recognized. The periosteum was greatly thickened and disorganized. Copious hæmorrhage took place from the bone ; the cavity was filled with lint, the edges of the wound approximated by sutures and adhesive straps, and water dressing applied.

The pain in the limb subsided entirely after the operation, and the cavity in the bone gradually filled with a fibro-cartilaginous substance.

May 21.—A sinus, through which a small probe can be passed, leads to the bottom of the bony cavity, where denuded bone is detected. A small spicula of bone came away a few days since.

June 7.—Discharged cured.

Sept. 12.—Saw John F. to-day. He has no pain in his limb, works daily as a gardener, without the slightest inconvenience ; the bone has diminished in size ; his general health is excellent, and he expresses much gratitude for being relieved of his protracted suffering. Several small spiculæ of bone have come away since he left the hospital, and a sinus still exists leading to the bottom of the cavity made by the trephine through which a small probe can be passed, detecting a spot of denuded bone. This will probably exfoliate and permit the sinus to heal.

The above case is regarded as one of especial interest, on account of the infrequency of the disease (but three cases* having been previously reported in this country so far as I can learn) ; on account of its resemblance, in some respects, to syphilitic disease, viz. : the exacerbations toward night, and the marked relief obtained at three different times by the use of iodine and rest ; and also from the satisfactory result of the treatment adopted.

Case 2.—Fracture of the styloid process of the radius ; fracture at the junction of the lower and middle thirds of the same bone ; and laceration of the urethra from muscular contraction without effusion of urine.—John F. ; æt. 14 years ; fell this day (March 22, 1857,) from a tree, which he had climbed for the purpose of getting his kite, which had become entangled in its branches, to the pavement below, a distance of about thirty feet, and was picked up in an insensible condition by a policeman and brought to the hospital. Soon after admission his consciousness returned. On examination, a fracture was detected, commencing at the base of the styloid process of the right radius, and extending down obliquely into the wrist

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* See case reported by Dr. McSherry, in Am. *Jour. Med. Sci.*, vol. xxii., N. S. p. 118.
do. do. Dr. Strong, in same journal, vol. xxv., N. S., p. 81.
do. do. Dr. Bleek, in New York *Jour. of Med.*, vol. xiv., N. S. p. 83.

joint, breaking off about one-fifth of the articular surface. The process was drawn up on the posterior surface of the radius, about one and a half inches by the supinator radii longus muscle. It was movable, but in consequence of the contusion and swelling of the part, it could not be returned to its place. There was also a fracture of the radius at the junction of its lower and middle thirds. The hand occupied the same position that it does in fracture of the lower end of the radius. He complained of pain over the right iliac bone, and tenderness on pressure over the three lower dorsal vertebræ. There was a bloody discharge from the urethra, *but no pain, contusion, or swelling, was observed then or subsequently about the perineum, scrotum, or penis.* His arm was placed on a pillow, an evaporating lotion applied, and an anodyne administered.

March 23.—Has discharged no urine, we learn, since the accident; his bladder is distended, and there is a bloody discharge from the orifice of the urethra. A No. 5 catheter was introduced by Dr. Hutchison with some difficulty, and the urine drawn off.

March 24.—Suffering a good deal from retention of urine. My right hand being sore, Dr. Krackowitzer, who was visiting the medical wards before the arrival of Dr. Hutchison, attempted to introduce the catheter, when it glided into a false passage about two and a half inches from the orifice of the urethra, and passed backward to the right of the median line, until it could be felt by the finger introduced into the rectum so distinctly, as to satisfy him that there was nothing interposed between the finger and the instrument, except the walls of the bowel. After a second ineffectual effort to pass the catheter, the boy got up and discharged his urine spontaneously. Dr. Hutchison attempted to introduce an instrument on the same day, when it again entered the false passage, and was felt by the finger *immediately* in front of the rectum. It finally entered the bladder by the natural passage. Rest, mucilaginous drinks, and cold water dressing to arm.

March 25.—Urine drawn off with catheter, its introduction caused great pain.

March 26.—Urine discharged spontaneously, with considerable smarting. There is a copious muco-purulent discharge from the urethra.

March 30.—The swelling and inflammation about the wrist-joint having sufficiently subsided, an ineffectual attempt was made to bring down the styloid process to its normal position, and, in order to prevent its farther displacement upward, a small pad of lint was placed above it, and retained in position by a strip of adhesive plaster, so arranged, as to exert a downward pressure. A pistol-shaped splint, extending from the elbow to the end of the fingers, and properly padded, was now applied to the outer side of the forearm, and a shorter straight splint to the inside.

April 20.—Splints removed; upper fracture pretty firmly united; the styloid process is immovably fixed in its abnormal

position. It was thought best to keep the splints applied a few days longer.

May 10.—Splints taken off, and the fractures found firmly united. The skin over the projection of the styloid process is ulcerated, and the bone beneath exposed. The stream of urine is rather small, and is attended with smarting. The muco-purulent discharge has subsided, leaving behind only a small mucous discharge.

May 20.—Sound passed to-day with but little difficulty, after which the urine was discharged in a large stream.

May 28.—Sound introduced, and followed by the same benefit as before.

June 7.—The motions of pronation and supination of the injured forearm, and flexion and extension of the wrist-joint, are performed perfectly, and he has no trouble in passing his urine. Discharged.

Fracture of the styloid process of the radius, and laceration of the urethra without extravasation of urine, are accidents which invest the above case with an unusual degree of interest. The latter injury will be alluded to in connection with the next case. Prof. Hamilton, in his elaborate paper on fractures, published in the ninth volume of the *Transactions of the Am. Med. Association*, gives a plate of a dissecting-room specimen, somewhat analagous to the above case, found in the possession of Prof. H. H. Smith, of Philadelphia, in which there is an oblique fracture of the lower end of the radius, without displacement, commencing at the base of the styloid process, and extending into the wrist-joint, at the junction of the outer and middle thirds of the articular surface ; there is also fracture of the styloid process of the ulna. The works of Sir A. Cooper, Malgaigne, Smith of Dublin, Chelius, Velpeau, Miller, Ferguson, Erichsen, H. H. Smith, and many others which have been consulted, contain no account of fractures of the styloid process of the radius. The above case is therefore believed to be unique.

Case 3.—*Laceration of the urethra from muscular contraction, without extravasation of urine.*—W. P., seaman, æt. 26 years ; native of United States ; was admitted into the hospital, March 25, 1857, at three P.M. Twenty-three hours before admission, he was struck over the region of the left trochanter major by the end of a sugar hogshead, which was being lowered into the hold of a vessel. He was unable to walk after the injury, but could stand on both legs. On the following day, however, he was unable to stand, in consequence of the pain about the left hip-joint. Three or four hours after the accident, he attempted to evacuate his bladder, but could not do so, and he observed at this time, that the orifice of the urethra was closed with coagulated blood.

At the time of admission, he was suffering considerably from retention of urine, which had existed since the occurrence of the accident ; he also had a good deal of contusion and pain in the neighborhood of the left hip joint, which prevented him from turn-

ing in bed. Moving the joint increased the pain greatly. *There was no pain, contusion, or swelling then or subsequently about the perineum, scrotum, or penis.* The catheter, introduced by the House Physician, (my hand was still disabled), glided out of the urethra at the membranous portion to the left, and passed backward, with very slight pressure, so far that there was barely enough of the instrument outside of the meatus to hold between the thumb and fore-finger. On introducing the finger into the rectum, the instrument was felt immediately in front of the gut, nothing intervening apparently, but the coats of the bowel. The catheter was passed into the bladder after much difficulty, and the urine drawn off.

On the following morning (26th) he was suffering from retention of urine, and Dr. Krackowitzer, who was visiting the medical wards before the arrival of Dr. Hutchison, introduced the catheter. The instrument several times glided into the false passage, and was detected by the finger in the rectum, immediately in contact with the coats of the bowel. Dr. Hutchison passed an instrument on the same day, and also observed the false passage. No extravasation of urine occurred ; the catheter was retained in the bladder eight days without local pain, or constitutional disturbance. After its removal the urine was discharged spontaneously, and for three or four days without scalding, but it contained considerable mucus. He had now recovered from the effects of the contusion over the hip joint, walked about the ward and felt quite well ; his urine, however, could not be retained as long as usual, its discharge was attended with scalding, and it contained mucus in considerable quantity, which adhered to the bottom of the vessel when turned up. He used a copaiva mixture and mucilaginous drinks, but no material change took place, and he passed into the hands of Dr. Minor, whose term of service commenced May 1.

The irritability of the bladder was now considerable ; he had to discharge his urine several times during the night, and was sometimes unable to sleep on account of pain in the bladder. The urine contained pus and mucus. Pariera brava, liquor potassæ, copaiva, etc., were used successively without benefit, and on June 13, an injection of one ounce of a solution containing 10 grs. nit. silver was thrown into the bladder. It produced considerable pain for a time, which was followed by a marked improvement. He did not get up to pass his urine for three or four nights, and the quantity of mucus and pus was greatly diminished.

Six days subsequently the injection was repeated, and was followed by the same benefit as before.

June 30.—Urine passes in pretty good stream, unattended with pain or scalding unless he walks about too much. The deposit of pus and mucus is one-half less than it was before the injections. Being anxious to visit his friends he left the hospital against advice, in July.

The prominent symptoms presented by the two preceding cases,

viz., a discharge of blood from the urethra, retention of urine, great difficulty in introducing an instrument, and the existence of false passages, observed in each case immediately after an accident, evince, I think very satisfactorily the nature of the injury to the urethra. They are especially interesting in two particulars: 1. For having been unattended by extravasation of urine, which must have been owing to the valvular nature of the laceration. 2. The rupture was not caused in either case by direct external violence, but was probably produced, as suggested by Dr. Isaacs, by the violent contraction of the muscles of Guthrie and Wilson, and perhaps of the transversus perinei, which took place when the accidents occurred.

Case 4.—*Ligature of the dorsalis penis artery for hypertrophy of the prepuce.*—D. D.; a native of Martinique; æt. 30 years; was admitted into the hospital in December, 1856; suffering with chancre, accompanied with considerable hypertrophy of the prepuce. The chancre healed under appropriate treatment, but the enlargement of the prepuce remained.

Being anxious to have the size of the organ reduced to its normal dimensions, Dr. Hutchison tied the dorsalis penis artery for the purpose of producing atrophy of the part by diminishing its vascular supply—that being the principal vessel through which the prepuce is supplied with blood. The ligature came away on the fourth day, and no untoward symptom occurred, except a want of action in the wound, which rendered stimulating dressings necessary. Pressure was applied to the prepuce by means of collodion, containing three grains of iodine to the ounce, which was painted over its surface. He left the hospital June 7, the hypertrophy being somewhat diminished.

Although ligating the dorsalis penis artery in the above case was not followed by complete relief, the result indicated that the operation may in some cases prove valuable. The suggestion is therefore deemed worthy of being recorded. The arrest of abnormal developments about the face, erectile tumors of the orbit, etc., by diminishing their vascular supply is well known. I am not aware that the above operation has ever before been performed.

Case 5.—*Varicose veins treated by Vienna paste as an escharotic.—Cure.*—John C.; æt. 55 years; seaman; native of Ireland; was admitted into the hospital November 30, 1856, with an indolent ulcer on the left leg of twenty-five years duration, produced by the varicose condition of the left internal saphena vein below the knee. Under the use of opium, strapping, etc., the ulcer has healed from time to time, and again returned. On April 7, 1856, Dr. Hutchison applied eight pieces of adhesive plaster of three or four thicknesses, and half an inch square, with a hole in the centre of each as large as a split pea, over the prominent points of the veins. The openings in the plaster were filled with potassa cum calce made into a paste with alcohol. It was removed at the end of forty minutes,

the parts washed with warm water, and a flaxseed poultice applied. The sloughs separated on the third day, and on the twenty-second day the issues were nearly healed, and the veins completely obliterated. He was discharged cured May 16. The skin over the seat of the recent ulceration had lost the bluish, flabby appearance it formerly presented.

BELLEVUE HOSPITAL.

Report of the Surgical Practice of the Second Surgical Division of Bellevue Hospital. By Dr. Stephen-Smith, Attending Surgeon.

AMPUTATION AT THE ANKLE JOINT.

Amputation at the ankle joint was performed with very indifferent success by the older surgeons. The failure was due rather to the inutility of the stump, than to the mortality after the operation. It was their invariable practice to make the flaps from the tissues about the ankle, and, with but rare exceptions, they left the malleoli undisturbed. The first difficulty which they experienced was in closing the wound over the projecting malleoli, and the second was the protrusion of these processes through the meagre covering of the stump, when the patient began to use his limb. Unfavorable as were the circumstances attending the early methods of performing this operation, still, many cases are on record in which a useful limb was obtained, due, doubtless, to the entire or partial absorption of the malleoli. Amputation at the ankle joint did not, therefore, obtain a place among the legitimate operations of the earlier surgeons.

It may fairly be questioned if operative surgery has in any instance made a more important advance toward the realization of its humane purposes of saving life and restoring useless limbs than in this single particular of amputation at the ankle joint. *First, as to its comparative safety:*—Previously to 1843, in all affections of the foot involving its removal, amputation was performed through the leg. The mortality after this operation, always considerable, varies with circumstances. In the Parisian hospitals it has been estimated as high as fifty per cent., even when performed for chronic disease, a condition most favorable to success. American hospitals give thirty-seven per cent., and English hospitals nearly twenty per cent.; a fair average of the mortality of this operation, may be put at twenty-five per cent. In 1850, Mr. Syme stated (*Monthly Jour.*,) that he had performed amputation at the ankle between thirty and forty times, with the loss of but a single patient, and in this case the unfortunate result was not due to the operation. Still more recently he remarks, "the operation itself I believe to be as free from risk as the removal of a finger or toe."

Second, as to the usefulness of the limb.—The point of election in amputation through the leg, has varied with every successive

generation of operators. This fact proves the difficulty of obtaining a useful stump in this situation. At best, the patient must have an artificial leg, with all the inconvenience which attends them; if he is wealthy, he may be made comfortable with a well-adjusted patent limb; but if poor, his only resource is in a clumsy peg leg.

Mr. Syme remarks of patients who have had amputation at the ankle joint:—"Patients who had suffered the operation, were able to stand, walk, and even run, without any covering or protection of the stump; and a gentleman present, having had his attention accidentally directed, a few days before, to some boys who were amusing themselves on a slide in the street, discovered that one of them had undergone amputation at the ankle joint." Mr. Syme seems to prefer this operation to that of Chopart. In some clinical remarks published in June, 1852, (*Monthly Jour.,*) he remarks, "In the girl, fourteen years of age, who is now before you, there is extensive disease of the tarsus, not leaving room for the performance of Chopart's operation, even if I deemed it expedient; which I have long ceased to do, from conviction of its inferiority to that at the ankle, especially in regard to the protection afforded against relapse. In one year alone, I performed three secondary amputations at the ankle, to remedy the sequelæ of Chopart's operation."

A man presented himself at Bellevue Hospital during the last winter, who had undergone amputation at the ankle joint, by Dr. Carnochan, a year or more previously. He was a book-pedler by occupation, and stated that he not unfrequently walked eight miles daily, without fatigue or inconvenience from his mutilated limb. He had but a very slight limp. He wore a short shoe, with the sole raised sufficiently to compensate for the loss of the foot.

The improvements which Mr. Syme made upon previous methods were in preserving the integuments of the heel, and in removing the malleoli. He first operated in 1842, and thus describes his operation:—"I cut across the integuments of the instep in a curved direction, with the convexity toward the toes, and then across the sole of the foot, so that the incisions were nearly opposite to each other." In subsequent operations he modified the plantar incision, and seems finally to have established a method which leaves nothing to be desired as regards the facility with which it may be performed, and the successful issue of the case.

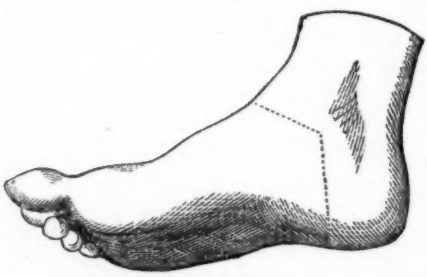
Where the plantar incision inclines forward from the extremity of the malleoli, passing along the anterior border of the heel, the dissection of the integument from the os calcis is difficult, nor is the large cup-shaped flap thus obtained desirable. It gives a redundancy of flap, and rather retards the cure by affording a large cavity for the collection of matter discharged from the wound.

Operation according to Mr. Syme.—The foot being placed at a right angle to the leg, a line drawn from the centre of one malleolus to that of the other, directly across the sole of the foot, will show the

proper extent of the posterior flap. The knife should be entered close up to the fibular malleolus, and carried to a point on the same level of the opposite side, which will be a little below the tibial malleolus. The anterior incision should join the two points just mentioned at an angle of 45°, to the sole of the foot and along the axis of the leg. In dissecting the posterior flap, the operator should place the fingers of his left hand upon the heel, while the thumb rests upon the edge of the integuments, and then cut between the nail of the thumb and tuberosity of the os calcis, so as to avoid lacerating the soft parts, which he, at the same time, gently, but steadily presses back until he exposes and divides the tendo Achillis. The foot should be disarticulated before the malleolar projections are removed, which it is always proper to do, and which may be most easily effected by passing a knife around the exposed extremities of the bones, and then sawing off a thin slice of the tibia connecting the two processes.*

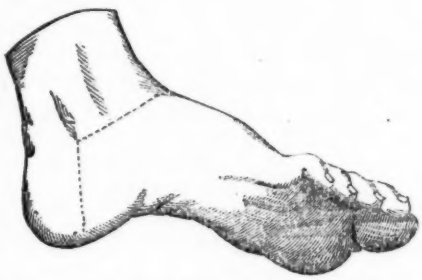
Mr. Syme directs the articular surface of the tibia always to be removed. This, certainly, should be done, if the disease has attacked the part; but, if healthy, it seems to be unnecessary. In the third case, which we report, the extremity of the tibia was removed, but without any apparent benefit as respects the result.

The following wood-cuts, of reduced size, taken from similar illustrations in the *Monthly Journal*, Feb. 1850, give a more correct idea of the line of incision than can any verbal description. It will be seen that they differ very materially from those given in text books.



It is constantly alleged that this operation is difficult and tedious. We believe, however, that it may be executed with as much facility as the circular amputation of the leg. Mr. Syme states that he requires less time than a minute to perform it.

Accidents.— The principal precaution to be observed, is in the dissection on the posterior part of the os calcis, in order not to wound the posterior tibial artery, and thus deprive the flap of its nourishment. It is recommended by some surgeons to disarticulate before dissecting the posterior flap. This proceeding increases the liability to wound this vessel, nor



* *Contributions to Surgery.*

does it facilitate the operation. Mr. Ferguson, who considers sloughing of the flap almost unavoidable, operates in this manner. This advice should not be followed. The artery may readily be avoided by keeping the edge of the knife constantly turned from the flap toward the bone. By this means also, the operator will not be liable to puncture the posterior flap—an accident which has occasionally occurred.

After Treatment.—Owing to the constant oozing of blood from the wound, the stump was not dressed in any case for several hours. The limb was placed in an elevated position, and cold water freely applied. The advantages of this delay were evident; the deep cavity formed by the extremity of the heel in the posterior flap contracted to a small size, which, with the complete cessation of the oozing of blood, removed the danger following its collection and disorganization in this situation. In every instance when the wound was dressed, the posterior flap was found as warm as the leg, and quite as sensitive to the prick of the needle, showing that its vascular and nervous supply was undiminished.

The only other fact worthy of notice in the after treatment, was the daily injection of tepid water, and disinfecting fluids into the cavity of the stump while suppuration continued. By these means the internal surface of the wound was cleansed, and the process of granulation and adhesion promoted. This practice we have adopted in all amputations with the most satisfactory results. Of six amputations performed during our last term of service (two of the thigh, one of the forearm, three at the ankle), all promptly recovered.

Case 1.—*Railway injury of the foot—Compound comminuted fracture of the metatarsal bones—Extensive suppuration—Amputation at the ankle joint—Rapid recovery.* (Reported by Dr. Francis V. White, House Surgeon).—H. McK., æt. 62 years; Irishman; by occupation a flagger; was admitted to Bellevue Hospital, August 8, 1856, having received a severe railroad injury of the left foot. The accident occurred in attempting to get off of one of the city rail cars while in motion, the patient being in a state of intoxication.

There were three flesh wounds upon the dorsum of the foot, the largest being upward of six inches in length, extending obliquely across the metatarsal bones, the integuments were extensively lacerated, the dorsalis pedis artery was laid bare, and the metatarsal bone of the great toe was fractured and exposed. There was also fracture of the other metatarsal bones. On the inner aspect of the foot was a third wound, three and a half inches in length, in the course of the metatarsal bone of the great toe. The sole of the foot was uninjured.

The limb was placed in an elevated position, and cold water dressings applied. When reaction was established, the patient began to give evidence of approaching delirium tremens. These symptoms were treated with tr. valerian and lupulin; and as his

condition was one of much prostration, beef tea and brandy were allowed.

August 10.—The soft parts are beginning to slough ; delirium continues : yeast poultices were ordered to the foot, and former treatment continued, with the addition of opium.

August 18.—Patient is improving, the lacerated integuments are sloughing, and the surface of the wound is covered with healthy granulations.

From this date the condition of the wound continued to improve, cicatrization was slowly established, and the fractured bones became apparently consolidated. At length, however, deeply seated suppuration took place, with great pain and constitutional suffering, the matter burrowed in the sole of the foot, and was discharged at several points both on the dorsum and plantar surface, A probe passed into the sinuses thus formed detected exposed bone about the base of the metatarsal bones of the first and second toes. The foot gradually assumed that peculiarly ugly shape so common in disease of the tarsal bones, the sole being greatly distended by the deep-seated suppuration.

All hope of saving the foot was now abandoned, and as the patient's condition was evidently becoming less favorable, from the pain and exhaustion due to the suppuration, amputation was advised. To this advice he reluctantly consented, after several weeks delay.

The question arose as to the point at which the amputation should be performed. On examination of the parts, it was evident that although the condition of the bones would unquestionably admit of Chopart's operation, the soft parts on the plantar surface had so long been the seat of inflammation and infiltration that the flap taken from these parts would be of very doubtful service. The integuments of the heel being perfectly sound, amputation at the ankle joint according to Mr. Syme's method, was approved in the consultation.

The operation was performed on the 13th of December, by Dr. Stephen-Smith, in the presence of Drs. Mott, Post, Watts, Van Buren, the Hospital staff, and a large class of students. The dissection necessary to enucleate the os calcis was easily accomplished, and the disarticulation readily effected. The condyles were removed with the saw, but the articular surface of the tibia was not excised. The internal condyle was soft and spongy, yielding readily to the knife. Ligatures were applied to the anterior and posterior tibial, the latter bleeding at the very edge of the flap, showing that it had not been divided above. The patient was placed in bed, and, as there was some oozing from the flap, cold water dressings were applied to the wound. The stump was dressed about four hours after the operation, the flap from the heel, though constantly enveloped with cold cloths, being as warm as the leg. The dressings were very light, and the leg was placed in an elevated position.

Cold H₂O dressings.

December 16.—Dressings changed for the first time; union by the first intention of three-fourths of the wound; synovial discharge from angle of wound; patient's general condition good. Ordered—quinine and beef-tea.

December 23.—Dressings have been daily renewed; condition of stump most favorable; one ligature removed; patient rapidly gaining strength; now has no night-sweats; pulse, which before the operation continued at 100, has fallen to 76.

December 26.—A small superficial abscess has formed over the internal ankle, which has been opened; otherwise stump is looking admirably, and the patient doing well.

From this time the case progressed favorably to its complete cure. On the 18th of January an abscess was opened over the external ankle, which had formed deeply, and was some time in healing. The patient now began to walk about the ward, having upon the amputated limb a stuffed shoe; there was no tenderness of the stump, nor did he experience farther inconvenience to the time of his discharge—February 23.

This stump had the appearance of that represented in the engraving accompanying the following case, allowing for the difference in the sexes of the patients.

Case 2.—*Caries of the tarsal bones—Extensive suppuration in the sole of the foot—Anæmia—Amputation at the ankle joint—Rapid recovery.* (Reported by Dr. JOHN G. JOHNSON, House Surgeon.)—Kate Riley; æt. 17 years; of delicate constitution and a strumous diathesis; was admitted to Bellevue Hospital, October 6, 1856.

She stated that ten months previously she was attacked, without assignable cause, with a pain in the instep of the left foot. The physician in attendance treated her disease as rheumatism for about three months; at the end of this time her foot seemed better, and she resumed her work, but was soon obliged to discontinue it, and then entered the hospital.

On admission she complained of pain in the instep, on attempting to bear her weight upon her foot; and on examination a slight puffiness was observed over the tarso-metatarsal articulation of the second phalanx, and on grasping this metatarsal bone firmly, and making pressure against the corresponding tarsal bone, she experienced acute pain. A considerable roughness of this articulation was also noticed on moving the joint surfaces.

The local treatment consisted of counter-irritants, first of blisters, then of iodine, and finally of the actual cautery; the general treatment was cod-liver oil, with tonics and generous diet.

The disease was not arrested, and, several months after, abscesses formed, which opened both upon the dorsum and sole of the foot, leaving sinuses communicating with carious bone. Her general health began to fail; night sweats supervened; and her appearance became that of a person suffering from anæmia. In consultation it was advised to remove the foot at the ankle joint. The patient refused to submit to the operation, and took her discharge

Iodine & Cautery

February 10, 1857. She again entered the hospital February 27, and was ordered tonics and good diet. Her condition gradually deteriorated until April 24, when amputation at the ankle joint was performed, according to the method of Mr. Syme, by Dr. Stephen-Smith.

April 25.—Patient slept somewhat during the night; vomited four times; pulse 120; is restless. Ordered—tr. aconite, gtts. ij, every three hours.

April 26.—Wound looks well, except slight blush of erysipelas; pulse 120. Ordered—lotio plumbi. et opii. to stump; tonics and stimulants internally.

April 27.—Slept well during night; no farther tendency to erysipelas of wound; the stump has been kept resting upon its external aspect, to allow of free discharge from that angle of the wound; slight discharge of sanious pus with synovial fluid. Ordered—injection of tepid water, followed by Labarraque's solution, one part to sixteen of water.

April 29.—Removed sutures and two ligatures last night; wound united throughout two-thirds of its extent; introduced a tent into external angle of wound, to give free exit to discharge; injections continued.

From this time the case progressed most favorably; the patient's general health improved rapidly; and the wound rapidly cicatrized, and on the fifteenth day after the operation she bore her weight upon the stump, in presence of the class of students. Dr. Smith referred the class to a patient in an adjoining bed, whose leg he had removed at the thigh, the same day with this case, for an illustration of the fact that synovial membrane does not retard the cure, and also, that the stump in the former case bears extreme pressure with ease, while the latter is still tender to the touch.

The accompanying wood-cut exhibits the appearance of the limb of this patient several months after the operation. The dotted line shows the point of union of the flaps.

Case 3.—*Severe frost-bite and sloughing—Repeated attacks of erysipelas and hospital gangrene, with sloughing of the foot—Amputation at the ankle joint—Recovery.* (Reported by Dr. John G. Johnson, House Surgeon.)—Morris Kerry; native of Ireland; æt. 30 years; intemperate; admitted January 26, 1857. On the 15th of January, eleven days before his admission, his foot was badly frost-bitten, and he came to the city for treatment. He was found in the street, intoxicated, in the storm of the night of the 26th, and brought to the hospital. The epidermis and nails of the toes were gone; the integuments were dead as high as the middle of the foot. Antiseptic poultices were applied, and tonics given. The slough separated gradually, and the stump began to heal kindly.

In the early part of April, four of the metatarsal bones were removed by the forceps; that of the great toe could not be sepa-

rated. The inside portion of the foot continued improving, while the outer did not.

On the 18th of May an attempt was made to remove a piece of necrosed bone, but the diseased portion was found to be so extensive that the operation was postponed. On the next day, the patient had chills, followed by fever and sweats, hurried respiration, great irritability of stomach, and vomiting. He was very restless, and would not take solid food. Milk was given, but this, as almost all other kinds of food, was rejected. The pulse was frequent, and moderately full and soft; great depression of spirits. The patient remained in this condition for two days, when the foot was attacked with erysipelas. A mustard paste was applied to the epigastrium, and small pieces of ice were given to the patient at intervals, and opium pills were ordered. The violence of the symptoms abated after the appearance of the erysipelas; still the stomach was so irritable that the patient could not take solid food, or even liquids in large quantities. Small doses of quinine and tr. ferri mur. were given with stimulants, and lotio. plumb. et opii continued to the stump. In about four days the erysipelas began to subside, and on the 13th of June he was allowed to sit up. He, however, walked round the ward, and was the next day attacked with precisely the same symptoms. On the 15th, hospital gangrene appeared in the stump, and the leg was immediately suspended in a sling, and the stump irrigated by a lotion of

℞. Creosote, . . . ℥ij
Tr. Catechu, . ℥ii
Aquæ, ... Oj

The gangrene continued to spread, and on the 17th there was about ten square inches of gangrenous surface, the disease still spreading with rapidity. The shreds of slough were removed by the scissors, and the whole surface freely touched with concentrated nitric acid. A large poultice being then applied to the stump, pulv. opii. gr. i was ordered every hour till the patient should sleep.

June 18.—Pulse 76, full and soft; tongue thickly coated; no offensive smell about stump. The disease arrested, except at a single point; dark color disappearing; swelling much less. June 19.—Slough beginning to separate; only one point looks bad. June 20.—Condition not as favorable as yesterday. 21st.—Foot again suspended, and concentrated nitric acid applied after the removal of all the slough that could be separated. The supporting treatment fully carried out, with tr. ferri muriat. and bitter tonics. 22nd.—Foot looking better; there is no offensive smell; general condition of the patient poor; no appetite for solid food; he takes a pint of brandy in two quarts of milk daily; one gr. of opium every four hours. 23rd.—Sloughing ceased; slough separating, leaving a healthy surface; leg is suspended in the sling, and creosote applied. 29th.—Slough entirely separated; patient doing well. Patient continued to do well until July 11th, when

Dr. Stephen-Smith amputated the foot at the ankle. The anterior flap was made longer than in the previous cases of the operation by Dr. Smith. This was deemed necessary, as the patient's constitution was so much debilitated from dissipation that he was especially liable to erysipelas and hospital gangrene. In this instance, the articular surface of the tibia was removed with the malleoli.

July 12.—The stump was dressed this morning, *eighteen hours* after the operation; the flaps were *warm* and *sensitive*, and had contracted so as to form a neat stump when approximated; a tent was introduced into the outer angle of the wound, to allow the exit of the pus. General condition very good; pulse 128; skin moist; did not sleep much the previous night.

July 13.—Stump somewhat œdematous; straps were loosened; slept well during the night; tongue coated; S. S. morphiæ (gr. i) ʒi administered during night. July 14.—Stump syringed out with weak solution of Labarraque; tongue less coated; appetite improving; not so much œdema around stump as yesterday; discharge slight. Dressed with straps as before, and lotio plumbi et opii applied.

July 15.—General treatment continued; slight discharge from stump; syringed with solution of Labarraque.

July 16.—Discharge of ʒij of pus from outer angle on pressure on flap; syringed and dressed; looking well. 17th.—Sutures removed; syringed; ʒij of pus on pressure. 19th.—Ligature of posterior tibial removed; condition improving. 21st.—Ligature of anterior tibial removed; tent still kept in; ʒij of pus discharged daily; union in nearly whole extent of wound.

July 24.—Small abscess formed on the anterior and outer portion of the stump; being opened, ʒi pus escaped. 27th.—Another abscess, near the first, was opened and discharged about ʒiss of pus. The stump is slightly swollen, and looks erysipelatous; complains of a burning pain in it; lotio plumbi et opii applied; patient irritable and restless; general treatment continued. 28th.—The spot in which the burning pain was felt has become gangrenous; it is about the size of a quarter of a dollar, and situated above the wound, rather externally. Upon removing the skin, a more extensive slough is seen beneath. This was removed, and pure creosote applied with a camel's hair pencil, fully and thoroughly to the whole sloughing surface; the creosote was also applied by poultice. 29th.—Sloughing slightly increased; external size of ulcer as large as a half dollar, and circular, with everted edges; creosote again applied pure; tonic and stimulant treatment continued. July 30.—Slough not extended; sloughy mass removed, and creosote again applied. Aug. 2.—Doing well; slough is separating; ulcer looks healthy.

August 3.—Patient attacked with severe pain in the epigastrium last night, with vomiting of greenish fluid; stump has an erysipelatous appearance this morning. Lead and opium wash to the

stump, and mustard paste to the epigastrium. ℞ Chloric ether ʒii—Liquor anisi ʒij—ʒi every two hours.

August 4.—General condition better than it was yesterday; erysipelas subsiding. Continue treatment.

September 5.—Patient has been walking about for more than a week. He bears all his weight upon the stump.

The cut exhibits the appearance of Kerry's leg at the completion of the cure. The line of the cicatrix is not seen, owing to the length of the anterior over the posterior flap. The disease had so encroached upon the heel, and the tendency to erysipelas and gangrene then prevalent in the wards was so great, as to render it necessary to make a long anterior flap. The stump was quite as serviceable as the others in the other cases.

In this instance, the articular surface of the tibia was removed with the malleoli. The results, so far as relate to the healing process and the subsequent condition of the stump, were not rendered more favorable thereby.

A marked feature in this case was the constant tendency to erysipelas and gangrene. The slightest exciting cause would produce the most severe attacks, preceded by great constitutional disturbance. Hospital gangrene, it is true, was somewhat prevalent in the ward during this period, partly due to an influx of Gen. Walker's soldiers, many of whom were suffering from it on admission; but Kerry showed a peculiar predisposition to the disease. Frequently, without any apparent cause, he would be attacked at midnight with vomiting, severe febrile symptoms, intense pain in the epigastrium, great depression, and on the following day the stump would assume the appearance of hospital gangrene. With the exception of a single attack, resulting in a small slough above the cicatrix, his progress was entirely favorable after the operation.

PART SECOND.

CRITICAL ANALYSIS.

ART. IX.—*A Treatise on the Practice of Surgery.* By HENRY H. SMITH, M.D., Professor of the Principles and Practice of Surgery in the University of Pennsylvania, etc. Illustrated by two hundred and seventy-four engravings on wood. Philadelphia: J. B. Lippincott and Co., 1856. pp. 828.

IF the progress of scientific surgery is to be measured by the number of treatises recently published, devoted to an illustration of its principles, and their practical application, we must conclude that this branch of medicine is in a most rapid state of development. Within the last five or six years, we can recall no less than seven general treatises on surgery published in this country.

The question naturally suggests itself:—Is there a demand for an increase of this class of works? We answer unqualifiedly in the negative, and will add our conviction that their publication is a worthless expenditure of time and money. We do not desire to be understood as discouraging the publication of surgical works; on the contrary, we would most heartily encourage all who occupy positions favorable for observation, to give to the world the results of their experience. We deem it the especial duty of the senior surgeon, whose ample opportunities for the practical study of surgical diseases has rendered his case-book a store-house of interesting facts, to embody in a convenient form for consultation the results of his life-long investigations. It is a duty which he owes alike to himself and to the profession which may have generously placed and sustained him in responsible but enviable positions.

And, instead of this constant re-hash of existing authorities, with scarcely any other variation than in the arrangement of subjects, let the junior surgeon, who aspires to authorship, devote his time to the preparation of elaborate monographs upon subjects as yet but partially investigated, and thus cultivate more thoroughly, or enlarge the domain of scientific surgery. In this field of research, he can find ample opportunity to acquire an honorable and lasting fame, while he confers upon his profession the most substantial benefits.

We make these remarks in no caviling spirit, but with a sincere desire to see the surgical talent of our country devoted to original research, and the production of new ore from the mine, rather than

to the dull and inglorious task of compilation, or of molding into new forms the metal which others have heroically wrung from the grasp of nature, and already sufficiently adapted to the purposes of science.

The author informs us in the preface to this work, that it has been prepared as an adjuvant to his surgical lectures, and as a companion to his *Treatise on Operative Surgery*, "the two works being intended to form one series on the Science and Art of Surgery." Of the necessity of this work as an adjuvant to the author's lectures, we can not speak, but we may say in behalf of the "young surgeon," whose progress this is designed to facilitate, that there was no such immediate demand for its preparation, as to have called for a serious intrusion upon his hours of repose, and compelled him to issue it, with an apology for its imperfections. The young surgeon could still consult, profitably, the works of Chelius, Ferguson, Erichsen, and others.

The work is divided into six parts, as follows:—1. *Surgical Pathology and Therapeutics.* 2. *Surgical Pathology of the Soft Tissues.* 3. *Pathology of Abnormal Growths in the Soft Tissues.* 4. *Of Injuries of the Soft Tissues.* 5. *Injuries and Diseases of the Bones.* 6. *Injuries and Diseases of the Joints.*

Passing over the first three parts, in which we find only the most common-place statements upon the different subjects treated, we shall notice a few points in regard to the practice of surgery, as taught by Prof. Smith in the subsequent chapters of his treatise.

In speaking of fracture of the nasal bones, Prof. Smith states (p. 337), "A blow upon the nasal bones, therefore, if of sufficient violence, may affect the crista galli, shatter the cribriform plate, and even encroach upon the brain itself, producing concussion, or more rarely, compression of the brain, or be followed by meningitis." That a blow of sufficient force, to fracture the nasal bones, may be followed by concussion of the brain or meningitis, there can be no doubt, but that it ever shatters the cribriform plate of the ethmoid bone, and thus produces compression, is not so clear. Chelius says, "Fractures of these bones may be accompanied with severe bleeding, and with symptoms of pressure or concussion of the brain, which latter symptoms depend on the propagation of the violence to the brain, and not on the pressing in of the walls of the nose, or of the cribriform plate." No one has investigated the subject more thoroughly than Prof. Hamilton, of Buffalo, and to his opinion we attach great importance. He says, "With neither of these accidents is the cribriform plate of the ethmoid likely to be broken or disturbed. Indeed, in numerous experiments made upon the recent subject, and in which the force of the blow was directed backward and upward, breaking and comminuting the nasal bones above and below their middle, with, also, the nasal processes of the superior maxillary bones, and the septum nasi, the cribriform plate of the ethmoid was, without an exception, uninjured. The exceeding tenuity and flexibility of the

septum nasi at certain points, prevents effectually the concussion from being communicated through it to the base of the brain." He thinks the cerebral symptoms which occasionally follow blows upon the nasal bones, is either owing to their being received upon the point where these bones rest upon the nasal spine of the os frontis, or to some direct impression upon the skull itself.

Prof. Smith believes that with ordinary violence, a dislocation of the lower jaw is much more liable to occur than a fracture, and that "even a blow upon the side of the jaw is more apt to produce a dislocation forward of that side, than a fracture." Our own experience would lead to an opposite conclusion, and such, we believe, is the fact. This is susceptible of a ready explanation. Dislocation of the lower jaw requires a peculiar position of the jaw, and a particular direction to be given to the violence to produce the accident, while a fracture may result from any position of the jaw, and any application of violence. The principal dressing recommended in fracture of the lower jaw is Barton's bandage.

In the treatment of fracture of the clavicle, we have a lengthy description, with a figured illustration of the objectionable and well nigh obsolete bandage of Desault. The author recommends it as answering "an admirable purpose in many cases," and instances children, lunatics, and those laboring under mania a potû. No one accustomed to the *practical* treatment of fractures of the clavicle, will consider the bandage of Desault worthy of the attention here given to it, even in the class of cases recommended. It has, in truth, so fallen into disuse, as to be no longer noticed in our best text books on surgery, and is rarely seen applied, except in the lecture-room.

The form of dressing which the author especially approves, is that generally known as Fox's apparatus. Of this he makes the following remark :—"By means of this dressing, very perfect cures have been accomplished. By very perfect cures are meant not only perfect union of the fragments, but union without angularity or any deformity" (p. 362). Daily experience in the treatment of fractures of the clavicle, has led us to prefer the apparatus of Dr. Fox, or some of its modifications, to any hitherto in use. It is easy of application, is readily borne by the patient, and admirably meets the indications of the case. In our practice, however, the very perfect cures here mentioned "without angularity or deformity" have not been accomplished in the ordinary oblique fracture of the clavicle. Nor do we believe this result attainable by any apparatus yet devised, where the patient is allowed to walk about. If he is confined to the supine position, such flattering cures may possibly be effected.

In this connection we had expected some notice of Dr. Bartlett's ingenious modification of Dr. Fox's apparatus ; but, our author's vision rarely extends beyond the horizon of Philadelphia in search of recent improvements in surgery.

Our limited space forbids a further examination of the subject

matter of this work. We had marked many sections for critical notice, but must forbear a more extended review.

We can not close the volume without referring to other and far more objectionable features of the work. While claiming to be a *Treatise on the Practice of Surgery* it has little more breadth or scope than a syllabus of lectures, in which are enumerated only the heads of subjects. Indeed, we half suspect that this work originally grew from a Syllabus to a Treatise through an unfortunate ambition of the author. In a careful perusal, we have been able to glean no new facts; while the explanation of the well known principles of surgical science, and their application to practice, want that precision in statement and illustration so essential to a treatise. But a clear and distinct style may not be the greatest fault of an author who writes for the instruction of the student. Inaccuracy is far more censurable; and to this charge Prof. Smith is especially obnoxious. His work abounds in loose and inaccurate statements, some of which are liable to lead the young surgeon into error, while others are so palpably incorrect that the merest tyro will detect the blunder. Opening the volume at random, let us verify our statement. We have Section III.—*Fracture of the Humerus.*—The writer states, that we may have "fractures of the anatomical neck, which are more common in young persons than in adults, in consequence of the want of close union between the head, which is an epiphysis in early life, and the shaft of the bone." Is the separation of a bone at the junction of its epiphysis and diaphysis a fracture? Without defining what is meant by the anatomical neck, we are taught in the next sentence that "by the *surgical* neck of the humerus is meant all that portion between the anatomical neck and the insertions of the pectoralis major and latissimus dorsi muscles" (p. 367). Again, we have the boundaries of the surgical neck thus lucidly pointed out:—"in a fracture of the surgical neck, or part above the pectoralis major and latissimus dorsi" (p. 368). "In consequence of the action of the pectoralis major and lattissimus dorsi drawing the upper end of the lower fragment inward, the elbow will generally project somewhat from the sides" (p. 368–9). Now, the two muscles named, have nothing to do with the projection of the elbow in fractures through the surgical neck of the os brachii, as a moment's reflection would have satisfied the author.

It is stated that in these fractures, "the lower fragment is forced toward the axilla by the contraction of the *flexor muscles* of the arm (p. 369). What particular class of muscles are here alluded to, under the title "flexors of the arm," we should be at a loss to understand, did not the next paragraph contain the following more luminous statement in regard to the cause of shortening in these cases, viz.: "More or less shortening, due to the action of the deltoid, biceps, triceps, and coraco-brachialis muscles which, arising from the scapula, *are inserted into the radius and ulna*" *!!!*

Passing this section, we can multiply instances of careless writ-

ing or ignorance. We will allude to but one more example. On page 405 we find the following : "The eversion of the foot, however, is not an universal accompaniment of fracture of the neck of the femur, nor is it by any means a positive sign that such a fracture has occurred, as a *dislocation of the head of the bone upward and backward on the dorsum of the ilium may cause the toe to turn outward* in a similar manner." The italics are our own. Comment upon such teachings is needless.

We can not conclude without expressing our surprise that the author should have published, early in his career as a teacher, a volume of so little merit. Occupying, as he now does, the professorial chair rendered illustrious by the talents of Physic, he must unwisely have anticipated that on him had fallen the mantle of the Father of American Surgery, and that his teachings must be oracular. But that "there is no royal road to knowledge"—that, however favorably circumstanced, each student in the field of science *must finally* rely solely upon his individual energy and genius for success, is here again demonstrated.

ART. X.—*Experiences of a Civilian in Eastern Military Hospitals, with Observations on the English, French, and other Medical Departments;* by PETER PINCOFF, M.D., Surgeon, Late Civil Physician to the Scutari Hospitals, etc., etc. London, 1857 ; pp. 102.

THE author of this book was a volunteer in the Civil Medical Staff which the British War Department commissioned, early in the year 1855, to enter a temporary service in the overcrowded hospitals in the East, and he writes candidly of what he witnessed, and most faithfully exposes the causes of, and suggests remedies for those organic evils which were more active and terrible than the foe-man's hand, in the destruction of the flower of the British army in the Crimean campaign.

Dr. Pincoff gives a lucid account of the thirty hospitals which the sad fortunes of war had suddenly, at the beginning of winter in 1854–5, called into existence on the shores of the Bosphorus and opposite the Golden Horn ; and while he faithfully, but charitably, recounts the causes and circumstances which aroused humane sympathies at home, and demanded *extra-military* and unusual provisions for the thousands who crowded those hospitals in a distant land, he very satisfactorily defines the position of that "civil element" in the Army Medical Service.

Anomalous and embarrassing as was the position which that element of the service occupied, it not only fulfilled the special mission of mercy upon which it was sent, but it gives promise of being the entering-wedge to such reform and improvement in the Medical Department of the British army, as will prevent the recurrence of such scenes as filled the hospitals and barracks in and around Constantinople during the year 1855.

Though we might wish that no future page of the world's history should be darkened by the record of war and bloodshed, the present impending crisis in the affairs of the Eastern nations, should induce the greatest vigilance in perfecting all the humane arrangements that can enter into the British military system. From Delhi and the Himalayas to Cape Comorin ; from Constantinople, Herat, and Bombay, to Madras, Rangoon, and even to Canton and Pekin, the British army and its allies may soon be compelled to repeat the terrific experiences of the Crimean campaign and the military hospitals of the Bosphorus ; and if repeated in those distant regions, it will be vain to hope for the voluntary labor of physicians in civil life, and the angelic succor of Sisters of Charity and a FLORENCE NIGHTENGALE.

The peculiar defects in the military medical and surgical organization in the British army appear to have been fully exposed by the unparalleled disasters and sufferings of the late campaign, and, fortunately for humanity, while aristocratic and stolid heads of the Admiralty, and the haughty military superiors have been attempting to shift the onus of blame from their own shoulders to the heads of the surgical staff, the fact appears that the British military surgeon is compelled by law to occupy a most menial position, without any power to correct such evils as those which decimated the flower of Her Majesty's troops in the East,—a fact most disgraceful to the nation.

After the most searching investigation the truth appears that, notwithstanding insuperable difficulties, the medical officers performed the most herculean labors, and that in the most praiseworthy manner. Said the Hon. Sidney Herbert, in the House of Commons, "Every account I get, says this, 'the medical men in their vocation are beyond all praise, especially those at the head of the establishment (at Scutari), they work night and day, their tenderness to the sick, their humanity, their zeal, their energy are mentioned by every one, friend and foe.'"

The necessity that called for the introduction of civilians into the British army hospitals, is well stated by Dr. Pincoff :—

"The sufferings, illness and losses of the entire army having extended to the surgeons, it is beyond doubt, that the want of medical attendance already complained of at Varna (before the troops proceeded to the Crimea), was most severely felt after the battle of Inkerman, and throughout the following winter (1855). It has also been fully proved that the army-surgeons, however capable and desirous of doing justice to their patients, were *trammeled by obstructive rules* and regulations, to avoid which, would have required an entire, and at that moment, an impossible re-organization."

"It had, moreover, been clearly shown, that had even the number of medical officers employed in the hospitals been adequate to the number of cases on hand, the existing system saddled the superior officers with numerous non-professional duties, which,

rendering their attendance upon the sick impossible, threw the whole of the cases into the hands of the junior members of the profession. Lastly, it had become evident that the continual working of a system which requires the medical man of a superior grade to devote all his time and energies to administrative duties, must needs have exerted a prejudicial influence on the professional acquirement of the senior members of that department, who, by medical experience, as well as by superior scientific attainments, ought to be considered the natural guides of the younger officers."

Early in the summer of 1854, the Army of Observation which had been stationed at Malta, was moved forward to the vicinity of Varna, and increased to 2,000 men, where the troops were quartered without reference to the hygienic conditions of the places of encampment. Very soon appeared cholera, dysentery, and fevers,—enemies more terrible than those which were so boldly met and driven from the fields of Alma, Balaklava, and Inkerman, during the following autumn.

Now, according to the evidence given by the chief military officers, those distinguished gentlemen were not in the habit of taking counsel from the medical officers on such general subjects as the selection of encampments, etc. Major-General Bentinck states, that "it is not usual to take the opinion of any medical officer on this point;" and it would appear, that when the counsel of the highest medical officers is given on any subject, its importance is ignored by the higher military officer. Even when the Director-General at home, in the discharge of his duty, provided amply for every want of the troops, so far as he had power to make provision, and when he had specified and urged the importance of every possible exigency, we find that the stores actually provided were allowed to wait for weeks in England; and even the warm clothing that Dr. Smith, the Director-General, as early as May, 1854, had urged the Military Secretary to have in readiness and forwarded without delay, did not reach the Crimea until the storms of the winter were lashing the Euxine into fury; and then only to be ordered out of the harbor of Balaklava, where, after remaining untouched for six days, the precious freight of more than one hundred and twenty-five thousand woolen garments was suddenly sunken in the stormy sea.

At Varna and Bulgaria, the army had for their sick, ticking for palliasses, *for which the purveyors denied straw*, wooden-legs but *no medicine-chests*, ambulances *without horses*, and a most meagre provision for any of the more certain and important contingencies of war. In the Crimea, in labors most exhausting, and amid scenes of carnage never before equaled, the army was found utterly destitute of the necessaries for camp-life, besides being very imperfectly supplied with the necessary provisions for the sick and wounded. Destitute of light ambulances and stretchers, and with only an ambulance corps composed of "old Greenwich pensioners,"

multitudes of the sick and wounded perished from exposure and neglect after engagements, or by falling out of line from exhaustion while on marches, and multitudes more might have perished had not the French army been well supplied with mule ambulances which they loaned the British.

There was but one hospital tent for each regiment, no suitable hospital provisions at any point east of the Bosphorus, and but meagre transports for the thousands who must be conveyed thither. The faithful and heroic officers of the medical staff were overworked, and, before the month of March, 1855, twenty-nine had died ; and previous to that date, or from September, 1854, to February 18, 1855, there had been received into the British hospitals in the vicinity of Constantinople, nearly eighteen thousand patients, of which more than three thousand died. Here we see what labors were thrown upon the few medical men who remained to perform the duty. At the time the sick and wounded began to come down to the Scutari hospitals from the Crimea, there were stationed at those hospitals only four surgeons and twelve assistant-surgeons ; and during the brief period of nine days there was added to the number of patients in those hospitals, three thousand eight hundred and seventeen formidable cases.

Facts like these, have prepared us to examine with great interest, the statements and opinions given by Dr. Pincoff, some of which we will here transcribe.

"From the summit of the Tchamlidja, a mountain to the northeast of Scutari, a panorama of surpassing beauty is presented to the eye. At a glance, one surveys the Turkish capital, with its mosques and minarets, its magnificent harbor, in which, the huge man-of-war and the tiny kayik are alike secure, and the blue waters of the Bosphorus, whose banks are for many miles studded with innumerable villages. The prospect is bounded to the North by the Black Sea, to the South by the Sea of Marmora. Poet or painter could hardly do justice to the landscape as I have viewed it, and yet, it was impossible, in the summer of 1855, to look down upon that fairy scene without feeling awed and saddened ; for within the range of vision, lay the greater number of suffering victims of the war then raging.

"To the medical observer, a hitherto unparalleled opportunity was here afforded of watching disease in its most varied forms, among sufferers of all nations ; and of witnessing the treatment and comparing its results in the various native tribes attended by their own physicians, along with that of the English, French, Sardinian, and German, in upward of thirty hospitals often containing fifteen thousand patients."

Next follows a brief and lucid description of the individual hospitals, illustrated by a map. The English had five hospitals, with four thousand three hundred and sixty beds ; the French had nineteen hospitals, with thirteen thousand four hundred beds ; while the Turkish and Sardinian forces were amply provided with room in their own quarters.

In describing the medical topography of the vicinity of the Bosphorus, he remarks :—

"A great, and very striking peculiarity in the manner and course of disease, is the briskness of the invasion, the rapidity with which it runs through its diverse stages. It has hitherto not been unusual with the profession to ascribe any otherwise unaccountable phenomena connected with the apparition and nature of diseases, to some hidden *telluric* or atmospheric influence. I have no doubt that a better understanding and a clearer experimental deduction from Humboldt's theory of isothermal lines, will ultimately give us the explanation of many of these facts. * * * The hottest summer weather succeeds the coldest winter without intermediate transition ; and the brisk and unexpected changes of the wind which I have mentioned, a violent thunder-storm, or a protracted blast of south-wind, which sometimes, during several days, renders crossing the Bosphorus so dangerous, will suddenly be followed by weeks of calm weather. * * * Epidemics present the same features of sudden invasion and disappearance. During the year 1855, I witnessed seven different successive outbreaks of cholera, distinctly limited to a peculiar locality in and near Constantinople, twice in our own hospitals, three times in the French. * * At Daoud-Pasha, the French convalescent hospital, there were in one night thirty cases of cholera, of which, by far the larger number proved fatal ; three days afterward, there was not a case left. * * * The principal, and nearly the sole, treatment of the physicians of the country, consists in blood-letting and in enforcing the most strictly abstemious diet ; every article of animal food, even in convalescence, is forbidden. It is rare to meet with any man or woman, who does not bear the traces of repeated scarifications on the legs and arms—for such is their favorite mode of bleeding—and a great many are in the habit of being thus blooded several times a year. * * * I was told by Dr. Macguffog, and by several other leading physicians in Constantinople that, within the last twenty years, bleeding has become less frequent, and seemed less required. * * * I do not, as many do, ascribe this change to fashion only, but believe that the type of disease has become less purely inflammatory all over the world. * * * It was observed that the troops arriving from Europe, by no means bore depletion as well as the natives or acclimatized inhabitants. The French, who certainly do not spare the lancet at home, were obliged to use it less frequently. * * * On the other hand, according to my own experience, confirmed by that of numerous observers, the patients returning from the Crimea, did by no means bear the even moderately stimulating treatment necessary for those newly arrived."

Dr. Pincoff states that the great cause of the fatality in typhus, was the strongly-developed scorbutic diathesis, nearly one-half of the fever-patients being deeply affected by scurvy, and in nearly all cases of fever he regarded scurvy as the primary and most

obstinate malady; and he remarks that these patients did not bear stimulants well.

These, and many other important particulars are mentioned by our author, who seems careful to do full justice to the regular medical staff of the army. He does that department the honor to say, that at the time when he arrived at Scutari, at the end of April, 1855, "*as far as the eye could see*, the arrangements of the hospitals were complete." After describing the arrangements and provisions for the wants of the patients, which were aided by the unparalleled labors and munificence of Miss Nightengale, Dr. Pincoff enters upon a searching examination of the essential faults of that routine system, whose obstructive rules and unnecessary machinery of forms, were quite as efficient as the enemy's batteries in the work of destroying British soldiers. We would, that the satire and humor of Dickens and Punch could be brought to bear upon the ridiculous system and practices of this circumlocution office.

Though thousands of grateful men will ever remember Florence Nightengale and her trained assistants, the bones of many brave soldiers who might have been saved, now lie bleaching in the Crimea and beside the Bosphorus. Miss Nightengale boldly exercised the peculiar rights of a woman, and claimed the privilege of ministering to the wants of the suffering; and she had from private sources ample means. But see how it fared with the first-class surgeon and physician, illustrated as follows in our author's experience:—

"In February, 1856, we had a few days of unusually cold weather. The snow was on the ground, and there blew a sharp east-wind; the wards then in my charge were exposed to the wind, without a ray of sun, and had inside-galleries which prevented the circulation of hot air. With constant firing, the thermometer could scarcely be raised to fifty degrees, and my patients complained bitterly of cold. As the fuel allowed, was not sufficient to keep up the fire through the night, a little wood was fetched from Miss Nightengale's quarters. Next morning, my requisition for a larger quantity of wood having been refused, I wrote to the Inspector-General, and was told that the 'regulations allowed one hundred and twelve pounds of wood for one stove, and no more, which exact experiment had proved sufficient to heat a ward.' I endeavored to give utterance to my astonishment, how on earth the afore-mentioned experiments could have been made, as the weather never yet had been so severe, and adduced the evidence of my thermometer to justify the shiverings of my patients; these remarks seemed to make some impression on my *chef*, who, however, told me that '*a Board must first sit*,' on the propriety of allowing a larger quantity of wood to be issued."

Similar, or even greater, were the difficulties in procuring any necessary extras for patients, or any utensil, air-pillow, surgical appliance, fresh supplies of food, or any mechanical labor that a

sudden exigency chanced to demand ;—a case in point,—the storm had broken some pains of glass in a window, and patients were compelled to live exposed to the pelting rain and wind for three days, while Surgeon Pincoff's requisition for the now much-needed repair was going its tardy rounds for the signature of the staff-surgeon, the approval of the P. M. O., the sanction of the purveyor, and the order from the engineer, the patient-requisition being for half a day in each officer's desk. The Doctor naively remarks that he really believes that had fire broken out in the hospital, "the orderly would have had to go to the orderly-surgeon, who would have sent a requisition to the staff-surgeon, P. M. O., and so on, before the engine would have allowed itself to be set working. And," he continues, "I have still in my possession, two requisitions for one gallon of barley-water for nine patients in Ward Sixteen, Corridor C., which were returned to me with the following items :—'P. M. O. Office, Scutari, February 27, 1856. The accompanying requisitions are returned to Dr. P., with the request that the name and regimental number of each man may be specified, as also, to mention the extract to be given to each man.'"

Even the humane requests of Miss Nightengale, could not modify the heartless machinery and senseless regulations of "the system," by which the necessities most urgent, and the requisitions most important, were delayed most needlessly. Dr. Pincoff concedes that the fault is in the "system," and not in the medical officers ; and he says, "I have met with junior officers not yet wedded to the system," and alive to its defects. * * * As for those in authority in the hospitals, who seemed to be the stumbling-blocks by their everlasting "contrary to regulation," whenever any trifle in the interest of the patients was demanded, the excuse may be pleaded, that the man who does not treat patients himself, is less cognizant of their wants and less anxious to supply them. I am moreover convinced, that most of them were too kind-hearted to refuse the sick any trifling indulgence, but for the system which, denying a man, when young, the privilege of exercising his judgment, leaves him nothing better than a machine, when he has attained the higher grades of his department."

It seems that one of the greatest evils in the organization of the Medical Department of the British Army Service, results from the multifarious and all-absorbing secular duties that are thrown upon him from the day he becomes a full surgeon. Though there may be advantages in having a learned and experienced physician to take charge of, and distribute, medical stores and hospital-dresses for patients, it needs no argument to show that it must be highly inexpedient to withdraw those first-class officers from the more important duty of rigidly inspecting, and personally advising in, the daily treatment and management of individual patients.

Again, in the British army, *promotions* are not usually made upon the ground of merit, and hence the right men are not always found in the right places, especially in the discharge of the secular duties that fall to the lot of first and second-class surgeons.

Never was there a more faithful and laborious physician than Dr. Menzies, the surgeon who first had the superintendence of the hospitals at Scutari; but lacking those administrative qualities requisite for the successful management of secular affairs, there resulted such confusion and disasters in his service, that he was compelled to resign his position.

Dr. Pincoff remarks, that "when a first-class staff-surgeon happens to be stationed in a hospital, he is not expected to demean himself to treating patients, with the exception of an occasional operation, etc. * * * Ten more years of occupation so devoid of interest and unbecoming a professional man, may now make a first-class staff-surgeon a deputy-inspector or inspector-general. If a stray operation or a consultation reminded the first-class staff-surgeon of his being a medical man, he is at liberty to forget that fact from the moment he becomes a deputy-inspector or inspector-general." It is not strange, therefore, that often the chief medical officer degenerates into a haughty and bullying secular head. Our author is of opinion that "Hippocrates himself, would not escape being bullied, were he to present himself in the garb of an assistant-surgeon."

Dr. Pincoff carefully reviews the French army medical system, and finds much to commend, and much to censure. The universal kindness to their patients, and the *esprit du corps* witnessed in the French physicians, as well as the excellent management of the internal affairs of their hospitals interested all visitors; but the ruling of the intendant, "who is always a non-professional man, is not unfrequently found to be indiscreet or unjust. Yet in the management of, and provision for the sick, the *medicin-en-chef* has full discretion and power. The following just remarks are made respecting the English and French systems for clinical attendance:—

"Those who have attended the French hospital must have been struck by the superiority *infirmiers* over the orderlies of the English hospitals. The *infirmiers* constitute a separate body, selected from the soldiers, and *are never sent back to their regiments*, unless at their own desire. * * Being handy of their nature, and stationary in their employment, and receiving proper instruction in hospital duties from the *infirmier major*, they become perfect nurses. * * * They are also, in times of peace, regularly exercised, for the duties in the field, and the *manœuvre* of the *Caisson d'Ambulance*."

In regard to the employment of female nursing in military hospitals, Dr. Pincoff remarks that "those who have seen the Catholic Sisters at work, in the hospitals of France, Belgium, and Italy, will not doubt the efficacy of their services; and those who witnessed their labors in the Eastern Military Hospitals, had certainly no reason to depart from that opinion. Protestant sisters are now employed in many civil hospitals in Germany, in England, there will be but few civil practitioners who do not prefer female nurses, to attend upon their private and hospital patients. The

experiment remained to be tried, in how far the services of ladies could be made available in British Military Hospitals. * * * I believe the result to have been satisfactory, and such as to warrant the anticipation of perfect success in future. Far from being (as was feared) exposed to anything approaching to disrespectful behavior from the patients, I have seen the ladies and Catholic Sisters, treated with real reverence, and invariably with proper respect; * * * it was observed that their presence exerted a beneficial influence on the tone and manners of the patients and orderlies, that swearing became less frequent, and duties and orders better attended to when enforced by them."

He justly observes, respecting the labors of Miss Nightengale, "No truer acknowledgment could be expressed by Government, of the services she rendered to the army, than by leaving to her to organize as a *system* the experiment she so triumphantly made; and if such services can be secured, there is no doubt that in the military hospitals also female assistance and supervision will be found the compliment of all nursing."

The seventh chapter of Dr. Pincoff's book, is devoted to what he aptly denominates "The Providence of the Barrack and Hospital," viz.: Miss Nightengale's nursing and munificent provision. He says—"I must speak of her who was so emphatically the providence of this Barrack-Hospital, whose ministry brought comfort to the sick and consolation to the dying, whose energy and self devotion compassed miracles in times of fearful war and calamity. * * * The great secret of Florence Nightengale's success in the noble task she undertook lay in her perfect training for the duties which it entailed, * * * she was practically *au fait* in the art of nursing, and above all, had from early youth, the one object of hospital regeneration ever in view, and the faculties of a mind of no common order, had been brought to bear on this one subject. * * * But Miss Nightengale's sphere of usefulness, was not confined to the sick; her active and benevolent mind embraced the whole army, and perhaps the amount of positive good done by her, was greater, even in other ways, than in actual nursing. She was foremost in every plan for affording the men harmless recreation, * * * on her own responsibility she advanced the necessary sum for completing the Inkerman Café; she aided the senior chaplain in establishing and furnishing a library and school-room, and warmly supported him in getting up evening lectures for the men. * * * She wrote letters for the sick, and took charge of the last bequests of the dying and forwarded them to their relations, 'She supplied the convalescents with books, games, and writing materials, and, with considerate attention to their comfort, had a tent made to protect those who were permitted to take the air, from the scorching rays of the sun, and endured the mortification of a refusal from the Hospital authorities to have it put up. * * * Our allies were liberally supplied by her with many hospital comforts, and to her

quarters in Scutari the natives, both Turks and Greeks, constantly resorted for advice, medicine, alms, etc."

Such is the testimony which is everywhere borne to the heroic devotion and effort of one lady, and such, the safe example of an exercise of the peculiar rights, and the wonderful abilities of woman to do good.

We believe that the time is near when well-trained female nurses will be found in all our civil and military hospitals, the most intelligent and faithful aids that the physician can have.

Dr. Pincoff discusses in a very able manner the various questions relating to military medical education, giving an interesting sketch of the British and Continental systems, with many statistics, and valuable practical deductions.

We can not here transcribe his chapters on this subject, but would commend this portion of Dr. Pincoff's book to all who are interested in the improvement of the military medical system of our own country; which, notwithstanding its obvious superiority over the British system, is far from being all that the honor and rights of our profession, and the interests of medical science demand. E. H.

ART. XI.—*The Crimean Commission and the Chelsea Board; being a Review of the Proceedings and Report of the Board.* By Col. TULLOCH, late Commissioner in the Crimea. London, 1857; 8vo. pp. 189.

THE veteran Col. Tulloch, with Sir John McNeill, having been commissioned by the British War Department to proceed to the Crimea, and make investigations respecting the provision and application of *supplies* for the army, visited the field of operations; and after very extended and careful inquiries, they submitted to the Department a voluminous and circumstantially minute Report —so faithful in some of its details, as to cause much anxiety among those officials by whose neglect had been caused the unparalleled sufferings of the troops.

Col. Tulloch's acknowledged ability as a statistician and judge of facts relating to military hygiene, is attested by his unequaled and voluminous reports on the "sickness, mortality, and invaliding among the British troops," in the West Indies, the United Kingdom, the Mediterranean, British America, W. Africa, St. Helena, the Cape of Good Hope, the Mauritius, etc., comprised in as many well-filled folios. His last commission, which sent him to the Crimea, was, doubtless, the most delicate and painful one with which he had been honored; and his final review, in reply to the flimsy excuses of the aggrieved officers, is a masterly defense of the rights of humanity, and it gives much valuable information respecting the causes of famine, disease, and death, which nearly annihilated a gallant army.

The following brief summary of the statistics of mortality, by disease alone, during the winter of 1855, gives ample warrant for the remarks which preface the review of facts :—

The average mortality of infantry,.....	39	per cent.
" " " troops in front,....	45	" "
" " " in 8 of the regiments,	73	" "

Eloquently adds the humane and faithful Commissioner :—"This loss, be it observed, occurred within the short period of seven months, and was exclusive of men killed in action, or who died of their wounds. * * * This loss having occurred in a country which, by the concurrent testimony of nearly all the medical officers, as well as the experience of the following year, appears to have been almost as healthy as Great Britain, except, perhaps, as regards the cholera."

"Out of about ten thousand men who died during these seven months, belonging to the Crimean army, only twelve hundred were cut off by that epidemic; the remainder perished by no foeman's hand—no blast of pestilence; but from the slow, though sure, operation of disease, produced by causes, most of which appeared capable at least of mitigation." And the fearless Commissioner eloquently continues :—"Armies have perished by the sword—they have been overwhelmed by the elements; but never, perhaps, since the hand of the Lord smote the host of the Assyrians, and they perished in a night, has such a loss from disease been recorded as on this occasion.

"With the graves of ten thousand of their countrymen before their eyes, with the mouldering remains of Britain's choicest cavalry beneath their feet, and with an overwhelming mass of evidence in their possession to show how much of this loss might have been avoided by a proper application of the supplies, could the Commissioners be expected to arrive at the conclusion of the Board of General Officers, that for all this no one in the Crimea was to blame?"

The defense made by those officers is both amusing and instructive. Take, for instance, that of the Commissary General, who succeeded in finding only a frivolous reason for not doing any important work that it was his official duty to see executed: —Scurvy had made its appearance among the troops, who were subsisting on worse than the lowest prison fare; while twenty thousand pounds of lime juice was lying in the commissariat stores at Balaklava from December 10 until the month of February, before it was allowed to be drawn for the use of the troops, though during that interval the suffering from scurvy was at its hight; and all this delay simply from the fact that, issued in daily rations to the whole body of troops, the quantity would all be used in about two weeks; hence it was thought expedient to wait the arrival of an additional cargo from England. Again, more than one hundred and thirty tons of fresh vegetables were at one time

brought to the wharf at Balaklava, but as there was no means of transporting the precious food to the camp, some four miles distant, most of it was permitted to decay and was thrown into the sea. Though ample tenders for supplying the Commissariat with live cattle and sheep were made from the various towns on the Turkish shores of the Euxine and adjacent waters, the economizing Commissary General declined to avail himself of these ready supplies, simply because some of the animals would necessarily be lost from the *sailing* transports—the steam transports being all employed in other service; yet the cattle were offered by the thousand at £4 per head. And again, the materials for hutting and for forage were not sent forward to the troops on the field, and even the warm clothing for the soldiers was kept in the commissariat stores, or on board ships that finally foundered; all this delay and loss from lack of means for land transport over the short distance from Balaklava to the field of operations; yet there were waiting the Commissariat's requisition at Constantinople, two thousand pack horses! But the Commissary insisted that to feed those horses it would be necessary to have *pressed hay* from England; an abundance of much cheaper forage was offered at every town from the Dardinelles to the Crimea, but it was objected that the transport vessels could not ship a full freight of such loose stuff as was offered in Eastern markets. Lastly, and most gravely, the Commissariat throws the entire blame upon the Treasury Department at home, because it did not forward the fragrant packages of pressed hay which would have enabled worthy Commissary Filder to have kept up a sufficient land transport, and thereby supplied the soldiers with food, fuel, huts, and clothing, for the want of which ten thousand lives were sacrificed.

Who can conceive that such official delinquencies, and such famine and untold suffering, could have occurred in the Crimea, if, instead of Lord Raglan, the General commanding, had been such an officer as the departed hero of Waterloo? During the Peninsular campaign, for some ten years, the great Wellington as vigilantly guarded against the contingencies of want and suffering in his forces, as against the movements of the enemy; and he closes a dispatch to one of his generals by saying:—"I wish I had it in my power to give you well-clothed troops, *or to hang* those who ought to have given them their clothing."

The details given by Col. Tulloch fully corroborate the opinion that Her Majesty's army officers are often very deficient in the knowledge and practice of the principles of *military hygiene*,—a branch of military education equal in importance to any that is taught at Woolwich or at West Point. Fortunately for our own national army and navy, *military medicine* is by our government honored with an *official status* that makes its instructions and decisions respected by officers of all grades. E. H.

ART. XII.—*Report on the Pathology of the Diseases of the Army in the East.* London, 1856. [Parliamentary Document,] Fol., pp. 120.

IN the summer, 1855, the British government sent out a special Commissioner, to make investigations respecting the pathology and history of the diseases that were so rapidly destroying the troops in the East. Dr. Robert D. Lyons, associated with Dr. Wm. Aitken, as an assistant, had the honor of conducting these important investigations, and their official report shows with what ability and success they labored.

We will refer our readers to a few of the more interesting points relating to the etiology and the types of the diseases examined by these pathologists.

Respecting constitutional and general conditions predisposing to disease, Dr. Lyons remarks :—"The constitution of the soldier in the Crimea had undergone the influence of agencies, which, for a long period, at least, sensibly depressed it below the average physiological standard, and the effects of which gave a marked character to the disease from which he suffered. * * * It seems undeniable that the circumstances in which the British army was placed during the winter of 1854–55, were such, as of themselves directly to induce the invasion of disease on a large scale, and in a malignant form."

The climate of the Crimea is admitted to be healthy, and, in it, some of the more important scourges of camp life were very rare. Says the report, "Ophthalmic disease has been almost unknown; lesions of the respiratory organs have been of unusual occurrence ; and with the exception of certain marshy lands on the borders of the Tchernaya, intermittent fevers seemed to have no habitat within the lines occupied by the besieging armies."

The physiological relations of the extreme youth of the majority of the troops receives proper consideration from Dr. Lyons. In illustration of the youthfulness of the soldiers, he states the following as an average of cases in hospital experience:

"The joint numbers on the occasions of the assaults on the Great Redan, received into one hospital in the field, amounted to six hundred and sixty-six, embracing all variety of gun-shot injuries, and some of the very worst kind. Of this number of men, the average age was twenty-four and a half years ; sixty-one were *under* the age of twenty."

Though youth may not be unfavorable to the results of operative surgery, it must be considered as a strongly predisposing condition for the operation of the ordinary causes of disease in army life. Such was the case in the Crimea.

Dr. Lyons found the *typhous* type strongly impressed on every form of disease. He remarks that "Acute Inflammatory Diseases were exceedingly uncommon ; I have not witnessed any such ; and the highest *tone* of symptoms which I have at any time determined to exist, would not, in my opinion, admit of being classed as other than sub-sthenic and sub-acute."

The typhoid, or enteric, was the prevailing form of fever, though in the secondary hospitals on the Bosphorus, petechial or true typhus prevailed to a limited extent. And it is stated that

"The abdominal viscera were those in which disease were most commonly manifested. Physical causes from without, and irritation from within, in some measure, at least, connected with peculiarities of life and diet, led to a predominant tendency to gastro-enteric derangements, and the consequent development of the diseases known as fluxes in their several forms."

After injuries and surgical operations, low forms of diseased action were almost certain to ensue. "Destructive processes were often exhibited in limbs after the operation of amputation, and only moderate success has been obtained in this class of operations." Dr. Lyons adds:—"In connection with this subject, some notice must be taken of marked constitutional effects, in all probability due to the excessive and habitual use of intoxicating liquors. * * * Habitually employed, even in not excessive quantity, I am far from agreeing with many that porter constitutes a perfectly healthy ration for the soldier." Proofs of the correctness of this opinion are abundant in civil life.

We have only space to refer to a few paragraphs of the body of the report, which is, in a great measure, statistical.

Diarrhœa.—The prevailing scorbutic diathesis, special enteric lesions, stasis of the portal system, and the general atony of the famished soldiers, was productive of great suffering from wasting diarrhœa. It was the prevailing complaint.

Cholera.—This fearful malady, as previously remarked by Dr. Pincoff, never invaded any considerable portion of the army at the same time, but made its advent suddenly in very limited districts, and after striking terror in a few regiments and during but few days, as suddenly disappeared; thus indicating some special local condition, with or without a peculiar meteoric state favorable to or productive of cholera. Dr. Lyons thinks there is good reason to connect these sudden outbursts of the malady, with marked meteorological conditions; and he states that at Scutari, on more than one occasion, the invasions immediately followed heavy falls of rain.*

Dysentery.—This malady was uniformly of the sub-acute character, and was attended with destructive ulcerations, sloughing, etc., and was often accompanied by grave secondary lesions. The lungs were the organs most frequently exhibiting these secondary engagements; vesicular bronchitis, plastic or purulent exudations into the vesicles and bronchiæ, or into the parencyma of the lung, etc.

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* See an interesting series of articles now appearing in the *Edinburgh Med. Journal*, entitled, "*Notes on the Cholera which appeared at Varna, and in the 'Agamemnon,' in the Black Sea*," etc., by Dr. MACKAY, R. N.; in which the author presents the evidences of the personal communicability of this malady.

Typhoid Fever.—The enteric lesions gave to this malady its principal importance, and they were very constantly observed. The reporters state that "the earliest period at which we have known characteristic changes to be presented in the abdominal organs, was about the eighth or ninth day;" and usually, the febrile symptoms were abated for some time before this anatomical characteristic became troublesome, or even noticeable. The cæcal portion of the ilium appeared to become first engaged, and not unfrequently there ensued a dysenteric complication.

An interesting series of observations on the specific gravities of morbid parts, was made by Dr. Aitken, which may incite to some important pathological inquiries. It is greatly to be regretted that the investigations of this Commission had not commenced at an earlier period and been carried to greater completeness. We are happy to notice that the importance of such scientific inquiries is so justly appreciated by the British Government, that special medical appointments to this, as a distinct service, have already been made, to accompany the troops to China and India. E. H.

BIBLIOGRAPHICAL NOTICES.

ART. XIII.—*A Theoretical and Practical Treatise on Midwifery, including the Diseases of Pregnancy and Parturition, and the attentions required by the child from birth to the period of weaning.* By P. CAZEAUX, Second American, translated from the Fifth French Edition by Wm. R. Bullock, M.D., with one hundred and fifty illustrations. Philadelphia, Lindsay & Blakiston, 1857, 8vo, pp. 992.

M. CAZEAUX ranks among the first and most reliable teachers of the obstetric art in France. Of the value which is attached to his writings by his countrymen, we have the proof in the fact that a fifth edition of his general treatise on Midwifery is required, and that the authorities have placed it in the rank of the classical works designed for the use of midwife students in the Maternity Hospital of Paris.

The present American edition is one of the most complete treatises on midwifery in the English language. It embraces a full and complete discussion of every subject relating to obstetrics, entering largely into the theories and principles of the science, and giving in detail the rules of practice.

The concluding Part is devoted to the *Hygiene of Children from Birth to the Period of Weaning*—an important addition to the work. An Appendix is also added *On the Use of Anæsthetics in Obstetrical Practice.*

The typographical execution of the work is excellent, and highly creditable to the publishers.

ART. XIV.—*Lettsomian Lectures on Insanity.* By FORBES WINSLOW, M.D., D.C.L.: London, John Churchill, New Burlington Street, 1854.

THESE lectures, three in number, have already been twice published, and are therefore not unfamiliar to the profession. They severally consider:—1. *The Psychological Vocation of the Physician.* 2. *The Medical Eidence of Insanity.* 3. *The Medico-Legal evidence of Insanity.* These discourses are elaborately and classically written, and are replete with suggestions of practical interest to the physician.

ART. XV.—*General Therapeutics and Materia Medica; Adapted for a Medical Text Book.* With Indexes of Remedies and of Diseases and their remedies. By ROBLEY DUNGLISON, M.D., LL.D. With one hundred and ninety-three Illustrations, Sixth Edition, revised and improved. In two volumes. Philadelphia: Blanchard & Lea, 1857., pp. 544 and 539.

THE author has here combined in a single work, a treatise on general therapeutics with a materia medica. Associated as these two departments are in practice, this arrangement of subject is natural, and very convenient for the practitioner. The present edition has undergone thorough revision.

ART. XVI.—*On Diseases of the Skin.* By ERASMUS WILSON, F.R.S. Fourth American, from the Fourth and Enlarged London Edition. Philadelphia: Blanchard & Lea, 1857, 8vo, pp. 649.

THE peculiar merit of Mr. Wilson's work on the diseases of the skin in his natural system of classification. The derma and its appendages being the seat of those changes which characterize cutaneous pathology, he makes the following four grand divisions of his subject:—1. Diseases of the Derma. 2. Of the Sudoriparous Glands. 3. Of the Sebiparous Glands. 4. Of the Hair and Hair Follicles.

Diseases of the Derma are treated under the following heads: 1. Inflammation. 2. Hypertrophy of Papillæ. 3. Disorders of Vascular Tissue. 4. Disorders of Sensibility. 5. Disorders of Chromatogenous Function. Inflammation of the derma is considered as:—*a.* Congestive; *b.* Effusive; *c.* Supperative; *d.* Depositive; *e.* Squamous; *f.* from presence of Acari.

In the manner of the botanist do we thus come by correct analysis to the nature of the disease in question. Not only is this method of studying the diseases of the skin the most accurate, but the system being based upon the pathology of these affections, the student readily associates with each individual disease, correct ideas of its essential nature.

The present edition is much enlarged, by the author's additions to several chapters, and may now be considered the most complete and reliable work on the diseases of the Skin in our language.

PART THIRD.

MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

1. *Effect produced on the circulation by the long continued action of cold water externally.*—Dr. H. B. Jones and Mr. W. H. Dickinson have published a series of interesting experiments to determine the effects of the shower baths with the following results :—

The usual effect of a strong douche or shower-bath is the immediate depression of the pulse. By the first shock of water between 64° and 68° F. the pulse becomes weak and irregular, and may be reduced in rate even fifty beats in the minute. After the first shock the pulse recovers a little, but remains weak until the secondary effect or showering comes on, when it becomes weaker and intermitting, and may be quite imperceptible. After ten to fifteen minutes the pulse remains very small and weak, and shivering continues while the experiment lasts.

If the shower-bath is a small one (eight gallons), and the person taking it in good health, no great difference is perceived in the pulse whether the water is hot (110°) or warm (47° F.). If the water is very cold (47° F.) the pulse becomes smaller, but the rate is not affected.

With a shower-bath giving twenty gallons per minute, a difference of twenty degrees (from 70° to 50° F.) causes a great difference in the shock. The difference in the after-effect, or shivering, is not so marked. The depression of the pulse when the shivering comes on is more continuous with the colder water, and is more manifest up to the end of the experiment.

When the pulse is raised above, or depressed below, its healthy standard, the shower-bath or douche produces very much less or a much greater effect than would be produced by the bath under ordinary circumstances.

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2. *Cold applications in pneumonia and pleurisy.*—Prof. Niemeyer, in his contributions to clinical medicine, expresses his opinion, based upon numerous observations, that in pneumonia and pleurisy cold applications (around the chest and back) are not only unaccompanied by danger, but as efficient here as in inflammation of external organs. They produce great relief, and the patients, even children, ask for their renewal when they have become warm. Dr. N. saw under this treatment the exudation cease earlier, the

fever extinguished sooner, and the patients often returned to their work on the seventh or eighth day, while he never observed metastases or the consequence of cold from his treatment. In the latter stages of these diseases Dr. N. gives preparations of iron with great success, on the theory adopted by distinguished pathologists that the blood-corpuscles are materially diminished in these diseases.—*N. Y. Med. Report.*

3. *A new mode of treating saccharine diabetes.*—M. Piorry is of opinion that sugar is indispensable to the maintenance of life (he founds this opinion upon the researches of MM. Dumas and Cl. Bernard), and on this account he thinks that diabetic patients ought to be supplied with sugar, and substances which are transformable into sugar, in order that they may repair that unnatural waste which is consequent upon their malady. With this view, he has brought the following case before the French Academy of Medicine:

Case.—The patient is described as being under M. Piorry's care in La Charitè (No. 19 Salle St. Anne), and as suffering from diabetes, with very copious secretion of sugar. All the viscera were sound, with the exception of some slight hyperthrophy of the spleen. From the second to the twelfth of January, ten litres of urine were passed daily. During this time, certain feverish symptoms, which came on in the evening, subsided under the influence of quinine. On the twelfth, the patient was directed to abstain as much as possible from all fluids, and to have a daily double quantity of meat, *with one hundred and twenty-five grammes of sugar-candy.* This treatment was persevered in on the following days, and the result was that the quantity of urine fell to two and a-half litres in the day—the specific gravity remaining the same, namely 1.060. On the second of January, five hundred grammes of sugar had been lost in the twenty-four hours; from the twelfth to the twenty-fourth, notwithstanding the addition of the sugar-candy, the daily loss of sugar was not more than one hundred and thirty-five grammes.

SURGERY.

1. *Amylene—Two fatal cases from its use—Condemned by the Academy of Medicine, Paris.*—Two fatal cases from the use of amylene, have occurred to Dr. Snow, of London. He is of opinion that death results from the fatal action of amylene upon the nerves of the heart, producing paralysis of the organ. In its administration, care should be taken that the air which the patient breathes contains not more than fifteen per cent. of the vapor.

The subject was recently brought before the Parisian Academy of Medicine, by M. Giraldès. In the report on his paper, it is asserted that the effects of this agent are, the increase of the number of the pulse by 30 or 40, the modification of the color of the blood, and the perturbation of the nervous system, inducing

insensibility, coma, and the abolition of the intellectual power. The conclusion of the report was against the reception of Giraldès' views. Velpeau said :—I maintain that a substance which in so short a time, and in the hands of him who recommends it, is dangerous to such a point that its employment ought not to be permitted.

2. *Early operations for hare-lip.*—Dr. Friedberg relates (*Med. Chir. Rev.*, July, 1856,) three cases of hare-lip operation performed at the following ages, viz. :—fourteen hours, ten hours, and three hours after birth. Chloroform was administered in each instance, and they all terminated favorably. The same writer advocates the early operation for hare-lip, in his recent work, *Chirurgesche Klinik.*

To these cases we may add the following :—Dr. Dawson (*Dub. Med. Press*, 1842,) operated on a child having a simple hare-lip, seven hours after birth. The pins were removed in forty-eight hours, and in two days more the union was so perfect that the mother, who had not seen her child, did not believe any deformity had existed. Mr. Bateman operated (*Med. Times and Gaz.*, 1854,) four hours after birth, where there was also fissure of the palate, so great as to admit the mother's thumb. The operation succeeded, and the fissure of the palate contracted so as scarcely to admit the edge of a sheet of writing paper. Malgaigne advocates early operation, and has operated nine hours after birth. P. Dubois and Guersant prefer operating immediately after birth.

3. *Ligature of the external iliac artery and vein—Rapid recovery.*—Dr. E. S. Cooper, of San Francisco, relates (*Trans. State Med. Soc. Cal.*,) a case of successful ligature of both the external iliac artery and vein. The disease was a traumatic femoral aneurism. The operation for tying the external iliac, was performed in the usual way ; but on attempting to separate the peritoneum, which was very much thickened and adherent to adjacent parts, a gush of venous blood occurred from the iliac vein. The only remedy was the ligature, and this was accordingly applied above and below the wound ; the artery was then tied. The patient made a good recovery. One fact worthy of note is, that the temperature of the limb did not fall materially. Dr. Cooper adds, that he has ligated the external iliac artery in six dogs, one of which died ; in five he tied both iliac artery and vein ; all recovered. In the first class, the limb became cold in every instance, in spite of stimulating applications ; the sensibility of the limb was also greatly impaired. In the latter class, the heat and sensibility of the limb remained nearly natural from the first.

4. *Resection after compound dislocations.*—Prof. Hamilton, in concluding an interesting paper (*Am. Jour. Med. Sci.*,) on compound dislocations of the long bones, favors resection. "If," he says, "we consider the question of the life of the patient only, the argument and the testimony seem to favor resection in a great majority of cases of compound dislocations occurring in large joints, and

in a considerable number of cases of similar accidents in the smaller joints. It is certainly more safe than non-reduction, or reduction without resection; and it is probably quite as safe as amputation or tenotomy."

5. *Extirpation of the entire clavicle.*—Dr. C. R. S. Curtis, of Chicago, reports (*Am. Jour. Med. Sci.,*) a case of successful removal of the entire clavicle, for an osteo-sarcomatous tumor, involving its middle third and external portion of sternal extremity. The patient had previously had syphilis.

6. *Dyspnœa from bronchocele relieved by division of the cervical fascia.*—Mr. Cusack relates (*Dub. Hospt. Gaz.,*) a case of bronchocele in a boy, æt. 17 years, which, by its pressure, caused such a degree of suffocation as to threaten his life. He obtained some relief by making pressure upon the tumor, thus relaxing the fascia. His symptoms finally became so alarming that surgical interference was necessary, when Mr. C. determined to divide the cervical fascia over the tumor. Before the operation was completed, respiration ceased, and he was obliged to open the trachea, and resort to artificial respiration. The patient revived; the wound was closed, and the relief was permanent; due, as the operator believes, to division of the fascia.

MIDWIFERY.

1. *Artificial dilatation of the os uteri in labor.*—Dr. Roberts, of this city, in the October number of the *Am. Med. Gazette,* contributes an article on a subject which he thinks has not been of late sufficiently attended to. He contends for the occasional great advantages of a "meddlesome midwifery;" deprecates too long a reliance on the endurance of the vital powers, and on the efforts of nature; and, in some cases, upholds an earlier resort to artificial aid than is now often given, from a fear of acting with too great precipitancy. The process of artificial dilatation with the finger, alluded to by Hamilton, and more definitely described by Burns, aided by the use of ergot, and rupture of the membranes in certain cases, he considers to be many times a valuable means of shortening the duration of the first stage of labor, and indeed, of hastening its completion in an advanced period. Dr. R. minutely, and, we think, clearly and practically, lays down the rules for its performance, the states of the os proper for its use, and the cases in which it is likely to succeed, or be needed. Dr. Roberts protests against an indiscriminate abuse of the process of digital dilatation, which, under the circumstances he has specified, has seemed to him feasible, safe, and beneficial, and the arguments against it to be drawn from its abuse. He thinks the *real* duty of obstetrical teachers and writers, consists rather in teaching their pupils how *to use* prudently and skillfully the resources of their art, when actually proper, than in advising them to refrain from them altogether, or too long, lest they might use them inju-

diciously, or too soon; and, in recommending artificial dilatation with the finger, as, under certain restrictions and in proper cases, a valuable eutocic, he hopes that he has neither "extravagantly overrated its advantages, overlooked its objections, nor indiscriminately advised its adoption." The article merits a perusal, as a contribution to obstetric science.

2. *Statistics of the coiling of the funis.*—Dr. Weidemann states that among 28,430 deliveries, the funis has been found coiled around the child in 3379 instances. In 3230 of these it was coiled around the neck, and in 149 around other parts of the body. Of the 3230 cases, 2546 consisted in a simple coil, and in 684 there were several coils. In relation to the causes of this occurrence, it is interesting to notice that of 1788 cases occurring at the Marburg Midwifery Institution, the funis was in 80 (1 : 22.2) under fifteen inches, and in 183 above twenty-five inches (1 : 9.71) in length; that in 54 (1 : 33) there was very little liq. amnii, and in 41 (1 : 43.6) there was very much; in 165 (1 : 10.8) the child was under five pounds weight, and in 28 (1 : 61.7) it was above eight pounds. Therefore, among the favoring causes of the occurrence may be mentioned a long funis, abundance of liq. amnii, and a small child.—*Med. Times and Gaz.*

3. *Statistics of placenta prævia.*—Dr. Schwarz, of Fulda, in Hesse-Cassel, having heard the frequency of placenta prævia stated in a medical society as far greater than he had hitherto believed it to be, examined in reference to this point the official returns made by the Hesse practitioners. These were supplied by 150 accoucheurs, during a period of twenty years, *i. e.* from 1835 to 1854 inclusive. They related to 519,328 births, and among these were only 332 cases of placenta prævia—the numbers varying from 8 to 28 per annum. Of these 332 cases, 246 women recovered, and 86 died: 251 children were born dead, and 85 were born living. In 40 instances the women were primiparous, and in 292 pluriparous. Podalic version was performed in 259 cases, and cephalic version in 7; while in 23 instances the children were removed by the forceps, in 6 by craniotomy, and in 13 by post-mortem Cæsarean section. In 8 instances the placenta was removed, and in 16 the plug was resorted to.—*Med. Times and Gaz.*

4. *Successful ovariotomy.*—Dr. H. N. Bennett, of Ct., reports (*Am. Jour. Med. Sci.*), a case of successful ovariotomy in a patient, æt. 24 years; unmarried. The tumor was a multilocular cyst, seventeen inches in circumference; her recovery was rapid and complete.

5. *Successful removal of both ovaries.*—A case is reported (*Am. Jour. Med. Sci.*), in which both ovaries were successfully removed by Dr. Potter, of Geneva, N. Y. The patient, æt. 25 years, married, had suffered two years from a tumor of the right ovary. The left ovary was also diseased, but not greatly enlarged.

CORRESPONDENCE.

Remarks on the use of compressed sponge. By Wm. C. Roberts, M.D. —(Communicated in a letter from Dr. Roberts to Dr. J. P. Batchelder.)—The first case in which I employed the compressed sponge, as prepared and recommended by you, was that of a young seamstress, which you saw with me. The disease was "a chronic mammary tumor" in the left breast, the size of a hen's egg. You were so kind as to apply the sponge for me the first time, and I had no difficulty afterward. A few applications sufficed to remove the disease entirely. In the case of a strumous, unmarried mulatto woman, of about forty years of age, in whom the glandular structure of both breasts was in a state of irregular hypertrophy, and much enlarged, a very great reduction in the size and extent of the engorgement resulted from a similar application, and it has not returned.

In no case have I derived more satisfaction in the use of compressed sponge, than in that of Master B. S., of this city, who had several large and deep sinuses in the right thigh, running up toward the hip joint, and, probably, communicating with the bone. The joint was anchylosed from long preceding morbus coxarius. Each in succession closed, under the daily introduction of sponge tents (sponge, dipped in a weak solution of gum arabic, and wound tightly with thread, which can thus be made of any requisite size to enter the fistula, and which the patient, in this case, amused his captivity by making in great variety and with great neatness), and he is now in fine health and spirits, and with a whole and sound limb. A period of several months was required for the cure. I have used flat discs of sponge, compressed in the copying-press, as applications to foul and fungous ulcers, and I have found from them great benefit in cutting down fungous granulations, causing an uniform and healthy-looking surface, with a good tendency to subsequent cicatrization. I have healed several unpromising and ill-conditioned ulcers by this treatment alone. I have no doubt of the efficacy of compressed sponge in the treatment of mammary abscess, as employed and recommended by Drs. Foster and Johnson, in the September No. of the New York *Journal of Medicine*, edited by Dr. Stephen-Smith. I regret that these gentlemen did not apply the treatment to the sinuses formed after suppuration. I can remember two or three in which the fistula rapidly healed, when treated in the manner alluded to in the case of Master B. S. I should be very loath to incise a sinus, until I had tried the effect of a compressed sponge tent introduced to the bottom. By its equal expansion in every direction, stimulating by its pressure the bottom of the sinus, and laterally destroying the pus secreting false membrane with which it is lined, and inducing in its walls a new and healthy action, the sinus speedily diminishes in depth, and progresses rapidly toward granulation and cicatrization. I much regret not being allowed to make use of the method, in a case of suppurated scrofulous abscess in the neck of a pretty little

girl, which, I think, could have been readily absorbed ; but which, under the knife of a rather conspicuous member of the surgical profession, has been attended with some deformity. A prejudice of the parents and friends, lest the absorbed fluid should be deposited elsewhere, and some indocility on the part of the young lady herself, defeated my intentions. I am about to apply the sponges, in the case of a large collection of pus above the rectus femoris, the result, doubtless, of scrofulous caries of the bone. I hope for its temporary absorption, at least, and you shall know the result.

An amiable, but unfortunate girl, once presented herself to me, at a house in my neighborhood, which I was visiting for professional purposes, who had been brutally assaulted, the preceding evening, by some ruffians who had forced themselves in. The conjunctivæ and eye-lids were swollen and extensively ecchymosed. I proposed to her the application of the compressed sponge, warning her, however, that it would be necessary for her to endure a few days of darkness. She consented, and in two or three days I had the pleasure to find the swelling gone, the blackness nearly removed, the patient much pleased and more than ordinarily recognizant. I changed the discs night and morning, and the rapidity of the effect exceeded my most sanguine expectations. I respectfully throw out this hint to such of my brethren as may be called upon to treat this unseemly, annoying, and suggestive infirmity. I once cured a loss of substance of some extent in the scalp, the result of a ragged and irregular wound caused by a fall, descending quite to the pericranium, by merely putting into it bits of compressed sponge, the size and shape of the opening, and binding them down with a roller. They expanded equally from the absorption of the pus, and with the best effects on the granulatory process : one which would not, I think, have resulted as speedily from the use of lint alone.

I have several times satisfactorily and easily dilated with sponge, the meatus auditorius externus, when threatened with contraction, after abscess ; have succeeded in removing suppurative inflammation of its walls, and obtained an easy access for injections and an opportunity for observing the tympanum, once thereby cauterizing an ulcerated spot, and once succeeding in the removal of a small polypus, attended with pain, deafness, and profuse, fetid, purulent discharge. The great dilatation of the meatus, which resulted from the introduction of the compressed sponge, afterward wetted, enabled me to excise it at its pedicle, to the great joy of the patient, and afterward to effect a complete cessation of the discharge. There are affections of the urethra and lachrymal sac in which, were it applicable, the sponge might be useful. You have, I know, devised an instrument for inserting it into strictures of the urethra, with which, I hope, you will some day be successful. In the nose, in polypi, benign or malignant, thickening and ulceration of the Schneiderian membrane, ozæna,

and especially in epistaxis, its use could not fail to be beneficial. The width and dilatability of the rectum is an objection to its use, though in ulcerations, excrescences, and contractions, its judicious employment might be rendered available. The same remarks apply, though happily with less force, to the vagina. As a tampon, in threatened or actually existing hæmorrhage, in cases of warty vegetations, and ulcerations of intractable character, I have successfully employed it.

Many years ago I was consulted by a lady, now of wealth and eminence in the far west, for a contraction of the vagina, with fungous disease of the neck of the uterus. The patient was much depressed in mind and health ; the connubial act had never been perfected ; the vagina admitted with difficulty the forefinger for a couple of inches ; its walls were hard and gristly. For a period of two months, almost daily, I distended it gradually, by means of a screw, bilaminated, flattened, rectum speculum (of the old fashion). It cracked, tore and bled, and the patient, a woman of high intellectual acquirements, amiable temper, and great fortitude (it was before the days of chloroform), and determined, if possible, to be cured, could scarcely endure the anguish. The advantage I gained, I secured and augmented by introducing between the expanded blades of the speculum, flattened, conical pieces of wood, increasing them in size, which I left, *à demeure*, as long as they could be borne. Thus, I succeeded, at length, in introducing a somewhat pointed four-blade speculum uteri, with which I dilated the vagina fully, cauterized the neck, removed its fungosities and ulcerations, diminished its volume by iodine, the prolapsus spontaneously ceased, and in about five months time, my grateful friend returned to her husband's arms, and has since become the mother of three children, two sons and a daughter ; destined, I hope, to be promoters of western commerce, social, intellectual, and moral advancement, and population. Had I but known then, as I do now, the utility of compressed sponge tents, in the dilating of contracted cavities, how much time and trouble to myself, and suffering to poor Mrs. N., might have been avoided !

I was consulted not long ago, by Dr. C. Dunbar, of this city, in the case of a young, unmarried lady, who had a fistula, very small, and not easily detected, about an inch within the vulva, and opening into the rectum, through, apparently, the thickness of the sphincter ani. It was approachable only when the patient was under the fullest influence of chloroform, and for many days we dilated it gradually, with compressed sponge tents, of augmenting size. When the layer of parts between the orifices was thus reduced by expansion to a mere film, we incised it, and dressed from the bottom. It healed rapidly. This will appear to my surgical brethren who love the flourish of the knife, and are not deterred by depth or importance of parts, thickness of substance or discharge of blood, an unnecessarily slow and timid process. Possibly it was so, but it suited my temperament, who think that

"discretion is the better part of valor;" who prefer the "*suaviter in modo,*" to the *fortiter in re;* the easier, if slower, operation of nature, to the violence of art; and consider that no safe and successful plan is the less deserving of esteem, because it is slow and gentle.

During my association, in the Department of the Diseases of Women and Children, at the Northern Dispensary, in 1844, with my friend, Dr. Crane, now of Brooklyn, we many times employed the gum elastic bougie, in dilating the internal os uteri, for the cure of dysmenorrhœa, after the manner of Mackintosh, and often with good effect. Every one knows that the introduction of a bougie is no easy matter in every case; in some, it is impossible, and even when most easy, it is slow work to dilate the os uteri internum by a succession of bougies, compared with the use of tents of compressed sponge, which are generally easily passed, and dilating rapidly will do in a few days what the others would require weeks to effect. Dilatation of the mouths and cavity of the womb, also, furnishes facilities for cauterizing the lining membrane in cases of long standing leucorrhœa, which often relieves otherwise incurable cases. A piece of fine sponge, between two and three inches long, and as thick as the forefinger, dipped in a thin solution of gum arabic, dried, and compressed, by being wound with fine twine, may be fashioned into a conical form, not much exceeding the size of an ordinary bougie, and passed, usually in the grasp of a long bullet forceps, with ease into the os, and up into the cavity of the womb. In preparing the sponge tent, which, of course, must be made of varying sizes, your advice that a string be passed through its centre before the compression is made, and not merely tied around its base, must be strictly observed; for, if the latter become detached by the softening of the sponge in the fluids of the uterus, and the sponge break off within the os uteri, it may not be easy to extract it.* Also, I advise that on no account a sponge be passed into the os, without a string attached, as it has happened to me, on two or three occasions, to have the tent caught up into the uterus, by a species of spasmodic suction, out of the grasp of the forceps, and retained there beyond the possibility of immediate reach. It is true, that in a few days, it is thrown off spontaneously, but, in the meantime, it causes pain, a febrile movement, an offensive discharge, and some little anxiety to both patient and physician, which, by suitable precaution, can always be avoided. The great extent to which the os and cavity of the

* Dr. Batchelder's method of preparing tents for this purpose, is as follows: Pass a long needle armed with a strong thread into the base, and through the whole length of the tent, and out at its point; then reverse it; entering it at the point of the tent, and passing it again through the whole length of the tent, and out at its base. This leaves two threads running the whole length of the tent, doubling at its apex, and passing out at its base, where the two threads, pendent from the tent, may be twisted together, and form a strong cord, by which the instrument may be withdrawn. He seldom allows the tent to remain longer than eighteen or twenty hours.

uterus can thus be easily dilated, in the course of two or three applications of the sponge, will much gratify those who have not yet employed it in this way; and, by following its removal with a little button of fused lunar caustic, on the end of a silver probe, the whole cavity can generally be cauterized with rapidity and ease, or, if a suitable syringe, a silver one, long and thin pointed, were at hand, as easily injected. I have seen as yet no syringe accurately adapted to this purpose. The stem of the long glass one in use, even when slenderest, is much too large for the purpose of general introduction into the uterine cavity.

I have not the slightest doubt that the safest, simplest, surest, and speediest way of inducing premature labor, will be found to consist in the introduction of compressed sponge tents into the os uteri. I do not see how, if repeated sufficiently often, dilatation of the os, followed by active contractions of the uterus, and the expulsion of its contents, can fail to be induced by them. The following passage from *Churchill's Med.*, third Am. Ed., Ph. 1848, p. 290, endorses these sentiments: "M. Bruninghausen and Klugè have proposed and practiced with great success the dilatation of the os uteri, by means of a piece of sponge placed within it and maintained there by a plug in the vagina." Speaking of it, Velpeau says, in comparison with "rupturing" and "separating" the membranes, "it is much more certain. The irritation which results is permanent, progressive, and regular, and *sustained* by the plug which is maintained in the vagina. Under the influence of such an excitement, uterine action is soon brought on, and it rarely fails to acquire sufficient energy." Hayn, of Königsberg, further says Churchill, adopted this plan with success.

I do not see further, why, in early stages of labor with rigid, undilated, and undilatable os uteri and inefficient pains, a sponge tent of suitable size might not be introduced within the os uteri, the membranes being either ruptured *or not*, and maintained there for a time by the tampon in the vagina, until such an amount of dilatation occurred as to cause its ejection, and no longer to necessitate its presence. In this way, it has occurred to me, in certain cases, the protraction often met with in the earlier periods of the first stage of labor might be overcome as safely as by belladonna, or manual dilatation, and with less trouble than by the system of long continued irrigation, recently proposed as a means of effecting this object by Dr. Geo. T. Elliot, Jr., of this city, (*vide N. Y. Jour. of Med.*, 1857). That this plan does not always succeed, is evident from cases on page 197 of his able article on puerperal convulsions, in the September number of that Journal (Lee, Draper). Sponges are oftener at hand and easier obtained than syringes, and it appears to me more easy and speedier to introduce a sponge into the os, than to inject at intervals several gallons of water.

Permit me to say in this connection, that I am happy to observe that this rising obstetrician has recognized and boldly sanctioned a "more frequent resort" than is customary, "to the harmless

measure of manual dilatation in parturient women," on which I have elsewhere, *in extenso*, published my own sentiments (see *Med. Gaz.*, Oct. 1857). He mentions three illustrative cases, and observes justly, I think, that "the non-recognition of this principle has probably cost many lives." May we not hope that, ere long, the introduction of the sponge tent into the os uteri, in early labor, as a means of dilating it, overcoming its rigidity and lessening the protraction of the first stage, may become a recognizedly admissible rule of practice?

I have thus, my dear sir, agreeably to your request long since preferred, given you hastily yet in a longer letter than I could have wished to write, my experience in the employment of compressed sponges, a knowledge of the use of which I derived first and wholly from you. For this, and every other valuable result of your long and close observation and extensive practice, which you have so often, so kindly, and many times so serviceably placed at my disposal, accept my grateful acknowledgments. None who use the compressed sponge can fail to be pleased with the safety, ease, and certainty of its action; nor otherwise than indebted to you for teaching them, or, at least, most strongly directing them to its uses.

SEPT., 1857.

Dislocation of femur on dorsum ilii—Reduction by Reid's method. By C. E. ISAACS, M.D., Brooklyn, N. Y.—(Communicated in a letter to the Editor.)—I was called, about a week since, to see a boy eight years old, who had received an injury of the hip joint, two days previously. On examination, I found that the head of the femur was in the sciatic notch. Having placed the boy under the influence of chloroform, I proceeded to the reduction, in the presence of Drs. Minor, Drake, Burge, and several other physicians. I first flexed the leg of the injured limb, upon the thigh, and then brought this thigh over so as to cross obliquely the middle of the sound thigh, and then flexed the injured thigh as much as possible toward the abdomen. I next gradually abducted the thigh, making at the same time rocking motions, downward and outward, when suddenly the head of the bone passed with a loud snap into the acetabulum. The whole proceeding did not occupy half a minute. This case adds another to the many which have recently occurred, showing the occasional great facility of reducing dislocations even of the hip joint by appropriate manipulation, and while under the influence of chloroform. I may state, in conclusion, that the patient has since done well.

BROOKLYN, Oct. 14, 1857.

Treatment of angular curvature, or Pott's disease of the spine. By J. A. WOOD, M.D., of Boston.—Having devoted my time and attention to the treatment of spinal diseases, as a specialty, for the last three years or more, examining closely the results that have followed, I now propose to show, by the report of cases which have been under my charge, that a cure in Pott's disease of the spine

may not, perhaps, in all cases, "necessarily consist of curvature," as is generally maintained; that the further progress of the curvature may generally be arrested from the time treatment is commenced, and, in cases of recent character, a cure effected with the curvature nearly, if not completely, removed, by appropriate mechanical appliances principally, to the entire exclusion of setons, issues, or any other counter irritant, or even restricting the patient to the recumbent position.

Case 1.—Master Frank; æt. 9 years; son of Dr. Lyman Bartlett, of New Bedford, Mass.; was placed under my care for the treatment of angular curvature of the spine, December 14, 1855.

The early history of this patient, as related to me, bore upon its face an unfavorable caste—three uncles, on the mother's side, having died in childhood of consumption, which they inherited from their mother, another victim of that treacherous disease. The patient, himself, exhibited early and repeated indications of premature decay, and, in the autumn of 1854, began to complain occasionally of pain in the left hip.

In January, 1855, had an attack of croup, followed with severe paroxysms of cough, which continued about three weeks, when an attack of measles supervened, of extreme severity.

For three months following the attack of croup, little or no respiratory murmur was perceptible in the left lung.

While recovering from the measles, the patient having occasion to get up in the night, it was ascertained that he could not stand upright, but was obliged to support himself by placing his hands upon his knees. This led to the discovery of a curvature of the spine, with a small knuckle, which was distinctly marked.

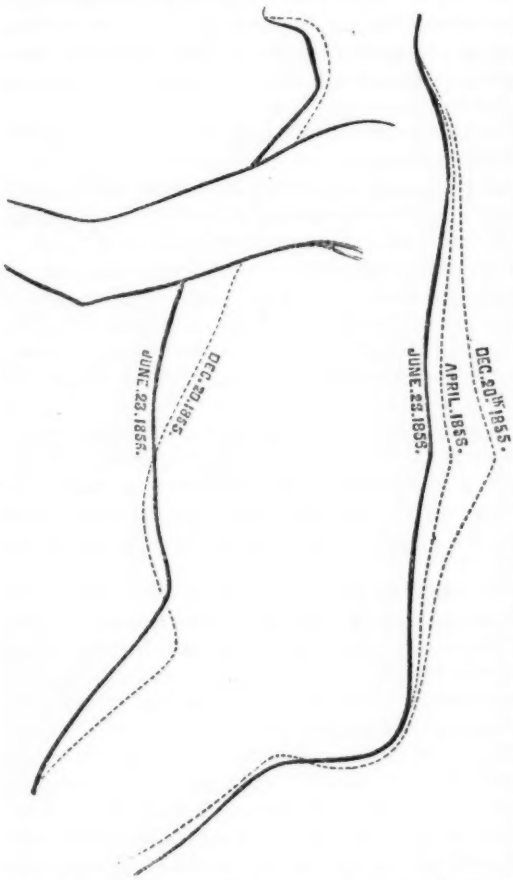
The pain in the back and legs was severe, extending to the knees and ankles, and affecting other parts of the system; the pain occurring at intervals, and the curvature continuing to increase from this up to the time I first saw the patient—some ten months after. The history, thus far, I obtained from the Dr. himself, who is scrupulously exact in noting observations, and in the statement of facts. The disease had now existed more than a year, affecting, particularly, the three lower dorsal vertebræ, producing a bold, angular projection of the spine backward, a pending and prominent abdomen, with a flattened chest. The lower extremities were contracted and drawn up, the left about an inch shorter than the right, and any effort to extend them was painful to the patient.

The pain was severe, the lower extremities nearly powerless, and but faint hopes had been entertained of a final recovery. He was now utterly unable to stand, and had not been dressed for nearly six months, wearied and worn, as this class of patients usually are, from pain and suffering and continued confinement.

Treatment.—This consisted in the application of a spinal apparatus of recent invention, constructed and applied upon a *new* principle, nicely adjusted, and readjusted from time to time as the necessity of the case demanded.

This afforded efficient and comfortable support to the spinal column, enabling the patient to resume, at once, the erect position and move about, cautiously at first, upon his feet, which he was permitted to do daily, as his strength and other circumstances would allow. Galvanism was applied by friction with the hand to the back and limbs once or twice a day, and continued for some length of time with the use of a free and generous diet.

On the application of the apparatus the relief from pain was *immediate* and *complete*, and in a few weeks the lower extremities were of equal length, and could be fully straightened without the least difficulty.



The patient quickly recovered, has grown rapidly, and has since fully regained his vigor, strength, and powers of locomotion, in either of which he would not now appear deficient in comparison with others of his age. The accompanying outlines of the case were taken by the Doctor at his own suggestion, a gentlemen of high professional reputation, who very kindly offered them to me, unsolicited, recommending their publication as a matter of medical interest. The anterior and posterior dotted lines represent the *precise* form of the patient as exhibited December 20, 1855. The two shaded, or dark lines represent *correctly* the form of the patient, June 23, 1856 (six months after), with the curvature nearly obliterated, the abdomen less prominent with a full and capacious chest. It should be here observed, that the curvature since the last outline was taken, has gradually diminished till nearly every trace of it has become extinct.

Case 2.—Miss R.; æt. 13 years; only daughter of Lincas Wood, Esq., of New Bedford, Mass., was placed under my care for the treatment of Pott's disease of the spine, May 31, 1856.

The disease commenced in October, 1855, with severe pain in the right hip, extending down the thigh, and occurring in paroxysm. This took place more frequently at night, after depriving the patient of rest, followed with loss of appetite, emaciation, general debility, and great contraction of the right lower extremity.

These symptoms continued up to the time my attention was first called to the patient, eight months from the commencement of the disease, when the case presented a prominent, angular curvature of the spine backward, inclining somewhat to the left, shortening the right leg three inches, the result of caries of the two upper lumbar and lower dorsal vertebræ. The patient was of a nervous temperament, strumous habit, and lax fibre, with a weak and frail constitution.

Treatment.—This consisted in the application of a spinal apparatus upon the *new* principle, constructed to meet the exigencies of the case, and readjusted as circumstances required, the use of cod liver oil, three times a day, a generous diet, and daily exercise upon the feet, what the patient was able to bear without fatigue.

On the adjustment of the apparatus, the relief from pain, as in the former case, was immediate and complete, and did not recur.

The patient improved rapidly, until the last of September following, when there were manifest indications of an abscess, forming in the right lumbar region near the curvature, which retarded somewhat the process of recovery,

The abscess was opened the last of December, and discharged three pints of pus, mixed with a proportion of dark colored blood.

The discharge continued abundant for several weeks, and at a subsequent period, numerous pieces of bone, varying from one quarter to half an inch in length, passed with the discharge of matter.

October 1, 1857.—The abscess is now healed, the curvature completely reduced, the lower extremities of equal length, original form fully restored, and the patient, whose weight at the time I first saw her (sixteen months since), was only sixty-five pounds, has now attained to one hundred and fourteen pounds, and, in all respects, has a healthy and robust appearance.

Boston, Oct. 1, 1857.

Novel treatment of dysentery. By J. W. Riggs, M.D., Plainfield, N. Y.—That unripe fruits have ever been regarded as a prolific *source* of dysentery, not only by the medical profession, but by the whole world, needs no argument to prove; and it follows, as a matter of course, that the use of these by a patient laboring under the disease, would, by common consent, be condemned, not only as injudicious, but highly dangerous.

It is not my purpose, then, to advocate their use as a remedy in the disease under consideration; neither is it my wish or intention to discuss or engage in any controversy concerning the

soundness or accuracy of the views so generally entertained on this subject. I shall, however, endeavor to demonstrate to the satisfaction of the reader, if possible, that however pernicious in their effects generally, yet they are not *necessarily*, and *in every instance*, as mischievous in their tendencies as is generally supposed; nay, more, I propose to show, by evidence which is satisfactory and conclusive to my own mind, that dysentry in a severe form, has, in one instance, at least, been promptly cured by the immoderate use of the very thing so universally shunned: viz., *half grown apples*.

Case 1.—The patient (Mr. C. F. Fox), a neighbor and estimable friend, and well known as a man of undoubted veracity, says: During the late war (1812), while in the militia service, and stationed at Sacketts' Harbor, I had a very severe attack of dysentery, which (the reader is aware) prevailed in a severe form, and to an alarming extent among the troops throughout the encampment. Never before had I known such suffering as I then endured. After several days trial of the means employed by our surgeon (Dr. S.) without the slightest relief, I was dismissed from the service; and, though now scarcely able to stand, and much less to travel, and yet unwilling longer to remain, under such circumstances I resolved, living or dying, to leave for my home some eighty miles distant from the harbor.

I accordingly set out on the following morning, though not without serious apprehensions, on my long, dreary, and perilous journey. Owing to my weakness and the paroxysms of pain, which were both frequent and severe, I found myself obliged every few minutes to lie down by the wayside temporarily, during my tardy progress. At one of my stops, I discovered an apple tree near, well laden with half-grown apples, and, though fully conscious that to me this was "forbidden fruit," yet driven by my sufferings almost to desperation, and comparatively indifferent as to consequences, I yielded to the temptation. I crawled through the fence; picked my hat half full of the apples; laid down under the tree, and ate every one before rising from the ground. Having thus indulged to satiety my uncontrollable longings for the juice of the sour apple, all the horrors of aggravated suffering, and, perhaps, a speedy death, as the penalty for my willful transgression and wreckless disregard of all former teachings and admonitions, began now to be realized. These painful forebodings were, however, of but short duration; for I almost immediately felt supported and invigorated, and within one hour from the time of this most delicious repast, I felt a degree of comfort, compared with which I had experienced nothing before, since the day of my attack. The next day I was entirely free from every symptom of dysentery. From this time onward, my convalescence was rapid and uninterrupted, though I continued during my homeward journey of several days, to partake occasionally, though more sparingly, of the same novel remedy.

As if to confirm this extraordinary statement, Mr. F. then adds:

Several years after this, I had another precisely similar attack, and, in this instance, without a dose of medicine of any kind, I cured myself in a day, by eating freely and repeatedly of half-grown sour apples.

Concerning the medical treatment in Mr. F.'s first illness, I am unable to speak definitely. From an acquaintance with the surgeon of his regiment, however, as well as from some knowledge of the treatment of dysentery in former times, I feel at liberty to infer, that so far as regards either *variety* or *potency* of the remedies employed, his treatment was by no means *deficient*. Though heroic as it doubtless was, and judicious as it may have been, we have the unimpeachable testimony of the patient himself, that up to the time of his leaving the harbor, it had signally failed of its object, and can not, therefore, claim to have contributed very largely to the speedy recovery of the patient, which so soon ensued.

Knowing Mr. F. to be incapable of misrepresentation, I gave the fullest credence to every word of his (to me) exceedingly interesting narrative; and believing then (as ever since) that the sudden improvement and rapid convalescence in his case, was mainly, if not wholly attributable to his "half-a-hat-full" dose of green apples, the "rationale" of these cures very naturally became an interesting subject of inquiry and investigation.

After considerable reflection, the thought occurred that the acid of the apple at this stage of its growth, *might*, perhaps, possess some peculiar property, not yet fully understood; and that the miraculous cures depended upon it; and in the absence of a more satisfactory explanation, I decided at once to subject my newborn theory to the test of actual experiment, by administering the expressed juice of green apples to patients then under treatment. I accordingly supplied myself at once with the article, which after being securely bottled (and colored, of course) was distributed with a liberal hand, during the remainder of the season (some weeks) among my dysenteric patient.

The free and assiduous use of my newly discovered remedy, was, however, in no instance, followed by any marked or appreciable results; and the high hopes I had formed of its efficacy, were sadly disappointed. Being now wholly at a loss for any explanation of the cure in Mr. F.'s case, all farther experiments were abandoned.

At as late a period as the fall of 1853, all my efforts to arrive at a satisfactory solution of the question—*how was Mr. F. cured?* were unavailing. Being in practice in New York city at this time, it became necessary for me to prescribe for a patient, whose relations toward myself, made his case one of more than ordinary interest.

Case 2.—The attack occurred early in September of the last mentioned year. Regarding absolute rest in the horizontal posture of the first importance in this disease, and indispensable to its successful treatment, this was enjoined as soon as the disease was made known. Confinement to the bed, and an occasional tea-

spoonful dose of paregoric, constituted the only means employed during the first ten or twelve days of the disease.

The case of my old friend and his cure by green apples, having now assumed a new interest, the idea at length suggested itself, that the operation of his novel remedy must have been mainly, and perhaps, purely mechanical. After due deliberation, I had no hesitation in testing the views now adopted in the case in hand.

Not deeming it necessary to make use of unripe fruit, I substituted in this case dry crackers and dry codfish, these being the only articles of food, of which the patient thought, he could partake in quantities sufficient for the purpose intended. Of these a large meal was made in the morning, and another equally large, after an interval of six hours, in the afternoon of the same day. A short time after the second meal, the pain which had come on at intervals, and was severe in degree, now became constant, though less severe than it had previously been. This continued to grow less and less severe, until late in the evening (about eleven o'clock) when, a moderate discharge from the bowels, of fæcal matter, mixed with some mucus and blood, marked the happy termination of pain and all further suffering from the disease. The next motion of the bowels did not occur until some thirty-six hours afterward, when the stool, though small in quantity, was of healthy appearance, and unattended with pain. The patient now began to take nourishing food, and, without an untoward symptom, in a very few days was perfectly restored to health.

It should have been remarked that, up to the time when the change of treatment occurred, the patient had had daily on an average from six to eight scanty and painful discharges from the bowels, accompanied by fever, thirst, loss of appetite, and, in short, all that well known train of symptoms usually attendant upon this disease. It may be worthy of note, also, that during the progress of this case, a fatal case of the same epidemic occurred under the same roof.

Case 3.—About June 1, 1855, a farmer, patient from the country, who had been laboring under dysentery for five months, visited the city to consult me about his case. At this time, he was having regularly from four to six or more discharges from the bowels daily, consisting of feculent matter and mucus, tinged with blood, and always attended with pain, more or less severe. He was, of course, considerably emaciated and feeble.

In this case the following course was recommended :—To take, at least, two full meals, every day, of rice thoroughly boiled, and made palatable by the addition of butter and sugar, or syrup, instead of milk. In addition to these, he was allowed the free use of ripe fruits of the season, and such other luxuries by way of nourishment as he might desire, to avoid much exercise, and all exposure to vicissitudes of heat and cold, or moisture. To relieve the tenesmus of which he complained very much. I also prescribed a pill to be administered *per anum*, and as occasion re-

quired, containing opium and tannin, one grain each. After pursuing this plan some three days, we called again and reported his bowels in better condition than at any previous time during his illness; the evacuations being less frequent, and more natural in appearance, with very little or no pain. The same treatment was carried out for some ten days longer, when he returned to the country entirely cured of the dysentery, and very soon recovered his usual health and strength, with no return since of the bowel difficulty.

MISCELLANEA.

Removal of the deformity left after the operation for hare-lip with fissured alveolus, by dental appliances.—The deformity of the face resulting from the old operation of removing the inter-alveolar process, which exists in double hare-lip, with a fissured hard palate, is one of the most disagreeable in appearance, and hopeless in treatment, which the surgeon is called upon to remedy. A case of this kind (the patient a young lady) came under our observation, in which the operation performed in infancy had left a very contracted upper lip, flattening of the nose, and deficiency of the alveolus which should contain the incisor teeth. As the remaining teeth were developed, they were so arranged as to cause the upper to close on the inside of the lower set; thus, at every closure of the jaws, the tendency was to contract the superior and expand the inferior alveolus. This had resulted in a folding together of the palatine portions of the superior maxillæ, and almost complete contact of the eye teeth.

As the deformity was not considered amenable to surgical means, the patient was referred to Dr. Wm. Dalrymple, a dentist of this city, who undertook to remedy the deformity. By means of simple but ingenious mechanical contrivances, he has succeeded in reducing the chin to its proper position, and in expanding the superior alveolus so as to bring the teeth in perfect articulation with the lower set. This has enabled him to introduce a sort of "plumper" under the upper lip, which restores the symmetry of the once contracted and deformed lip, and relieves in a marked degree the flattening of the tip of the nose. The change in the physiognomy of the patient is of the most marked and gratifying character.

Dr. D. reported the case briefly to the recent convention of dentists, at Boston, where it excited great interest. The details of the case, with illustrations, will appear in a future number of this journal.

Bellevue Hospital.—The winter course of clinical lectures in this institution, was opened on the 19th of October, with an address by John W. Francis, M.D. A large number of students and medical gentlemen were present on the occasion. Washington Smith, Esq., one of the governors of the Alms House, was called to the Chair, and introduced Dr. Francis. The address was replete

with interest, and was cordially received. Upon its conclusion, Dr. J. R. Wood spoke of the great importance of clinical instruction, and predicted that the day was not distant when our colleges would require the student to take out a clinical ticket, as a prerequisite to graduation. He announced as lecturers, Profs. Clark, Metcalf, and Barker, Drs. Elliot and J. R. Wood.

Medical Schools.—The Medical Colleges of this city commenced their winter courses of lectures on the 19th and 20th of October. The attendance of students is flattering, considering the financial embarrassments of the country.

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